DOCUMENT RESUME

ED 357 150 CE 061 911

TITLE	Commercial Vehicle Driving. Florida Vocational Program Guide.
INSTITUTION	University of South Florida, Tampa. Dept. of Adult and Vocational Education.
SPONS AGENCY	Florida State Dept. of Education, Tallahassee. Div. of Vocational, Adult, and Community Education.
PUB DATE	Jun 88
NOTE	81p.
AVAILABLE FROM	Division of Vocational, Adult, and Community Education, Bureau of Career Development and Educational Improvement, Florida Education Center, Tallahassee, FL 32399-0400.
PUB TYPE	Guides - Classroom Use - Teaching Guides (For Teacher) (052)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Curriculum Design; *Driver Education; Employment Potential; Entrepreneurship; Equipment Maintenance; Inspection; Job Skills; Occupational Information; Outcomes of Education; Performance Tests; Postsecondary Education; Professional Development; Program Guides; Reference Materials; Safety Education; Secondary Education; Services; *Traffic Safety; *Vocational Education
IDENTIFIERS	Florida; *Truck Drivers

ABSTRACT

This guide identifies considerations in the organization, operation, and evaluation of secondary and postsecondary vocational education programs. It contains both a vocational program guide and Career Merit Achievement Plan (Career MAP) for commercial vehicle driving. The guide contains the following sections: occupational description; program content--curriculum framework and student performance standards; program implementation--student admission criteria, cooperative education, and student organization participation; instructional resources--student reference materials, service manuals, and periodicals; facility design recommendations and safety, maintenance, and liability; suggested equipment list; and professional development--technical updating and teacher standards and related professional organizations and support services. The 13 intended outcomes are as follows: vehicle safety and accident prevention procedures; vehicle operating regulations; cargo handling and documentation procedures; pretrip preparation procedures; vehicle inspection procedures; vehicle maintenance and servicing procedures; basic vehicle control procedures; backing, coupling, and uncoupling skills; basic vehicle maneuvers; road driving skills; hazardous driving skills; employability skills; and entrepreneurship. The Career MAP displays student performance standards and documents the level of achievement on the standards for each of the 13 student outcomes. (NLA)

FL 026 018

019346
proposal #018858

ED357150

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

L Meadows

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

FLORIDA VOCATIONAL PROGRAM GUIDE FOR COMMERCIAL VEHICLE DRIVING

Prepared by

Department of Adult and Vocational Education
College of Education
University of South Florida
Tampa, Florida 33620-7750

State of Florida
Department of Education
Tallahassee, Florida
Betty Castor, Commissioner
Affirmative action/equal opportunity employer

Division of Vocational, Adult, and Community Education
Bureau of Vocational Program and Staff Development

June, 1988

CCF061911

BEST COPY AVAILABLE

© State of Florida, Department of State, 1988

Authorization for reproduction is hereby granted to the State System of Public Education as defined in 228.041(1), Florida Statutes. No authorization is granted for distribution or reproduction outside the State System of Public Education without prior approval in writing.

ACKNOWLEDGEMENTS

The Division of Vocational, Adult, and Community Education expresses appreciation to Raymond Hill and staff of the Career MAPs project at the University of South Florida under the direction of Jack Grisham for their efforts in preparing this program guide. Staff members are Robert Hicks, Sandra Stokes, Karen Childress, Linda Grisham and Joan Evans. Special thanks is given to Frank Ryder of Ridge Vocational-Technical Center for his contribution to the VICA information.

The Division would also like to thank the following industry representatives and vocational educators who, by sharing ideas at conferences and workshops, have contributed to the content of this publication.

INDUSTRY REPRESENTATIVES

Randy Beasley	Safety Director, Gator Freightways, Inc.
Tom Heath	Safety Director, Commercial Carrier Corp.
Pat Patton	Fleet Safety Supervisor, Florida Steel Corp.
Reo Hatfield	Terminal Manager, Smiths Transfer
Huey Wooten	C. F. Industries
Jeff Drury	Smalley Transportation Company
Jerry Osborn	H. L. Stansell, Inc.

VOCATIONAL EDUCATORS

David Barnes	St. Petersburg Vocational Technical Institute St. Petersburg, FL
Bob Brown	Washington Holmes Area Vocational Technical Center Chipley, FL
Ed Campbell	Ridge Vocational Technical Center Winter Haven, FL
Oscar Davis	Bradford Union area Vocational Technical Center Starke, FL
Jay Marquard	McFatter Vocational Technical Institute Davie, FL

Charles Rolandini	Miami Lakes Technical Education Center Miami Lakes, FL
John D. Salter	Washington-Holmes Area Vocational Technical Center Chipley, FL
David Smith	Bradford Union Area Vocational Technical Center Starke, FL
Donald Winterberg	Lawtey Correctional Institution Lawtey, FL
Elaine Wright	Mid Florida Technical Institute Orlando, FL

CONTENTS

Acknowledgements i

Table of Contents iii

Introduction 1

Occupational Descriptions 3

Program Content 5

Curriculum Framework 6
Student Performance Standards 8

Program Implementation 15

Student Admission Criteria 16
Cooperative Education 21
Student Organization Participation 23

Instructional Resources 25

Facilities 33

Facility Design Recommendations 33
Safety, Maintenance and Liability 39

Suggested Equipment List 43

Licensure and Credentialing 47

Professional Development 53

Technical Updating and Teacher Standards 53
Related Professional Organizations and Support Services 54

INTRODUCTION

Vocational education meets the needs of students desiring to pursue a selected vocation and is designed to provide training that is realistic in meeting present and future employment opportunities. In recent years, applications of science and technology have expanded rapidly, increasing the education and training required of workers. This has made vocational training programs more attractive as an educational option. The new technologies require well-trained workers to carry out both standardized and specialized procedures, and whose training foundation has given them the capacity to keep pace with continuing technology demands.

The Florida Department of Education shares with business and industry the determination to provide opportunities for upward mobility to as many Floridians as possible. Vocational training programs can keep pace with the demands of new industrial patterns and can provide the opportunity for many of our citizens to gain financial stability and an improved sense of self worth. Therefore, it is necessary to create exemplary vocational programs and to make those programs consistent throughout the state.

This Program Guide identifies primary concerns that should be considered in the organization, operation and evaluation of a vocational education program. It has been developed to provide useful information to local school district and community college administrators, instructors, program advisory committees, regional coordinating councils and others charged with the responsibility of offering vocational education programs.

OCCUPATIONAL DESCRIPTION

A principle occupational title is identified for each vocational training program. This title is validated by the United States Department of Labor Dictionary of Occupational Titles (DOT) or other appropriate references. Such references may be the United States Department of Commerce Standard Occupational Classification Manual (SOC), the Occupational Employment Statistics Survey Dictionary (OES), or Vocational Preparation and Occupations (VPO) prepared by the National and State Occupational Information Coordinating Committees. Information obtained from industry advisory committees may also be used to validate the principle occupational title. The job title and code number for this program are listed in the curriculum framework which accompanies this guide.

The United States Department of Labor Dictionary of Occupational Titles (D.O.T.) identifies the job title for this occupational area as follows:

D.O.T. JOB TITLE	D.O.T. CODE
Tractor Trailer Driver	904.383-010

The definition (description) for this job title is taken from the D.O.T. for easy reference.

904.383-010 TRACTOR-TRAILER-TRUCK DRIVER (any ind.) trailer-truck driver.

Drives gasoline or diesel-powered tractor trailer combination, usually long distances, to transport and deliver products, livestock, or materials in liquid, loose, or packaged form: Drives truck to destination, applying knowledge of commercial driving regulations and skill in maneuvering vehicle in difficult situations, such as narrow passageways. Inspects truck for defects before and after trips and submits reports indicating truck condition. Maintains driver log according to Interstate Commerce Commission (I.C.C.) regulations. May assist workers in loading and unloading truck. May transport new automobiles or trucks from manufacturers or rail terminals to dealers and be designated TRANSPORT DRIVER (motor trans.). May drive tractor with two trailers hitched in tandem and be designated DOUBLE-BOTTOM DRIVER (any ind.). May drive tractor-trailer combination to deliver poles for utility and construction companies and be designated POLE-TRUCK DRIVER (const.; light, heat, & power; tel. & tel.). May work as member of two-man team driving tractor with

sleeper bunk behind cab and be designated LONG-HAUL-SLEEPER DRIVER (any ind.). May drive tractor-trailer combination to deliver or spray water and be designated WATER-TRUCK DRIVER (const.; petrol. production) I.

PROGRAM CONTENT

The Division of Vocational, Adult, and Community Education, as required by State Board of Education (**S.B.E.**) **Rule 6A-6.0571**, publishes Vocational Education Program Courses Standards annually. This document specifies the minimum program content for the operation of a vocational training program for the occupational titles listed. Each program identified in the Florida Department of Education Course Code Directory is required to establish course standards. The standards for each vocational offering are comprised of two major components: (1) Curriculum Framework and (2) Student Performance Standards.

Curriculum Framework (CF)

The Curriculum Framework specifies the exact course title, course number, levels of instruction, major course content, laboratory activities, special notes, major course concepts and intended outcomes. The program requirements stipulated in the curriculum framework have been approved by the State Board of Education and are the legal bases for delivery of instruction.

Student Performance Standards (SPS)

The Student Performance Standards are a resource list of job-specific competencies. This list is generated and approved by industry experts and becomes the basis for curriculum development in vocational programs. Local school districts and community colleges must, by law, adopt student performance standards for their vocational programs. They may, at their discretion, adopt the list provided or develop their own as long as there is sufficient content to address each intended outcome. A program may provide instruction beyond the minimum specified in the SPS if desired. The decision to do this should be based on local industry needs. However, the minimum must be presented.

The SPS for secondary level programs contain a third component, course structure. This component specifies the number of courses required for program completion and the content of each course. The courses may be taught in any sequence, but the content may not be changed unless approved by the Division of Vocational, Adult, and Community Education.

The curriculum framework and student performance standards are intended for use as a guide, not a teaching tool. Teachers or curriculum development personnel are expected to develop or select complete curriculum materials for their training programs based on the curriculum framework and student performance standards. Each intended outcome and SPS should be thoroughly analyzed for related cognitive and procedural subskills. The curriculum framework and student performance standards are presented in the following pages.

CURRICULUM FRAMEWORK PROGRAM AREA: Industrial

FLORIDA DEPARTMENT OF EDUCATION EFFECTIVE DATE: July, 1989

PROGRAM TITLE: Commercial Vehicle Driving

CODE NUMBER: Secondary _____ Postsecondary TRA0081

Florida CIP IN49.020500

SECONDARY SCHOOL CREDITS ___ COLLEGE CREDITS ____ POSTSECONDARY ADULT VOCATIONAL CREDITS ____

APPLICABLE LEVELS(S): __ 7-9 __ 9-12 X Postsecondary Adult Vocational

____ Postsecondary Vocational X Other 30, 31

CERTIFICATION COVERAGE: COMM DRIV 7

I. MAJOR CONCEPTS/CONTENT: The purpose of this program is to prepare students for employment as tractor trailer and/or truck drivers (904.383-010). This program also provides supplemental training for persons previously or currently employed in these occupations.

The course content will include the following: operation of large semi truck tractor vehicles; loading and unloading cargo; reporting delays or accidents on the road; verifying load against shipping papers; and keeping records.

The course content should also include Principles of Work Environment Readiness (P.O.W.E.R.) skills training in communication, leadership, human relations and employability skills; and safe, efficient work practices.

II. LABORATORY ACTIVITIES: Driving range activities are an integral part of this program. These activities provide instruction in the use of tools, equipment, materials and processes found in the industry. Students are also instructed in the following: loading, backing and manuevering on a practice field and public highways with other traffic.

III. SPECIAL NOTE: Students completing this program must exhibit a safe driving record and be at least 21 years of age to comply with Florida Department of Transportation requirements.

The cooperative method of instruction may be utilized for this program. When the cooperative method is offered, the following is required for each student: a training plan signed by the student, teacher and employer which includes instructional objectives and a list of on-the-job and in-school learning experiences; and a work station which reflects equipment, skills and tasks relevant to the occupation the student has chosen as a career goal. The student must receive compensation for work performed.

If this program is 450 hours or longer, in accordance with Section 233.0695 F.S., the minimum basic skills grade level required for this postsecondary adult vocational program is: Mathematics 7.0 and Language 7.0. This grade level number corresponds to a grade equivalent score obtained on a state designated basic skills examination.

The typical length of this program for the average achieving student is 320 hours.

IV. INTENDED OUTCOMES: After successfully completing this program, the student will be able to:

01. Describe vehicle safety and accident prevention procedures.
02. Comply with vehicle operating regulations.
03. Demonstrate proper cargo handling and documentation procedures.
04. Demonstrate pre-trip preparation procedures.
05. Demonstrate vehicle inspection procedures.
06. Perform vehicle maintenance and servicing procedures.
07. Demonstrate basic vehicle control procedures.
08. Demonstrate backing, coupling and uncoupling skills.
09. Demonstrate basic vehicle maneuvers.
10. Demonstrate road driving skills.
11. Describe hazardous driving skills.
12. Demonstrate employability skills.
13. Demonstrate an understanding of entrepreneurship.

STUDENT PERFORMANCE STANDARDS EFFECTIVE DATE: July, 1989

PROGRAM AREA: Industrial SECONDARY NUMBER_____

PROGRAM TITLE: Commercial Vehicle Driving PROGRAM NUMBER: TRA0081

01.0 DESCRIBE VEHICLE SAFETY AND ACCIDENT PREVENTION PROCEDURES--The student will be able to:

01.01 Identify and explain the use of vehicle safety equipment.
01.02 Explain the use of fire extinguishers and fire fighting procedures.
01.03 Utilize seat belts and personal protection gear appropriate to type of operation.
01.04 Describe safe lifting procedures.
01.05 Describe personal safety equipment and procedures.
01.06 Describe actions applicable for vehicle accidents.
01.07 Describe accident reporting requirements (company, state, federal).
01.08 Identify all information needed for accident reports to the State, the employer and the insurance company.
01.09 Describe procedures for protecting the scene of an accident.
01.10 Identify types of hazardous cargos.
01.11 Describe personal liability requirements.
01.12 Identify hazardous road conditions that are a potential threat to the safety of the tractor trailer driver.
01.13 Describe activities and characteristics of other road users that make them potentially dangerous.
01.14 Describe the potential consequences of excessive speed.
01.15 Describe the potential consequences of use of drugs or alcohol.

02.0 COMPLY WITH VEHICLE OPERATING REGULATIONS--The student will be able to:

02.01 Comply with hours of service regulations.
02.02 Maintain a complete, neat and accurate driver's duty status log.
02.03 Keep accurate records required by hours of service regulations.
02.04 Perform mathematical calculations necessary to recap and apply totals to the hours of service regulations.
02.05 Determine driving hours remaining on a particular day or tour of duty.
02.06 Comply with applicable Department of Transportation regulations.
02.07 Comply with Florida Public Safety Commission regulations.
02.08 Comply with Interstate Commerce Commission regulations.
02.09 Comply with state and local traffic laws including restrictions on vehicle size and weight.
02.10 Identify permit requirements.

03.0 DEMONSTRATE PROPER CARGO HANDLING AND DOCUMENTATION PROCEDURES--The student will be able to:

- 03.01 Load and unload cargo safely and efficiently.
- 03.02 Obtain gross weight and axle weight.
- 03.03 Distribute cargo load to meet legal weight and safety requirements.
- 03.04 Secure cargo using blocking, bracing, packing, rope, cable, chains and strapping.
- 03.05 Mount placards when carrying hazardous materials.
- 03.06 Describe procedure for use of common cargo handling equipment, including pallets, jacks, dollies, handtrucks, forklift trucks, nets, slings, poles and other equipment.
- 03.07 Identify categories of hazardous materials and the need for specialized training to handle hazardous materials.
- 03.08 Identify hazardous materials documentation requirements.
- 03.09 Verify nature, amount and condition of cargo on both pickup and delivery.
- 03.10 Verify information on bill of lading and properly record and report discrepancies and damage to the cargo.
- 03.11 Obtain appropriate signatures on delivery receipts and other required forms.
- 03.12 Properly prepare a manifest.
- 03.13 Properly handle C.O.D. shipments.
- 03.14 Verify door seal number against shipping document.
- 03.15 Comply with port of entry or exit and other inspection station procedures.

04.0 DEMONSTRATE PRE-TRIP PREPARATION PROCEDURES--The student will be able to:

- 04.01 Check and secure tractor trailer or vehicle permit.
- 04.02 Check for accident reports packet.
- 04.03 Plan a route from one point to another that is optimal in terms of travel time, fuel costs, potential hazards and federal, state and local travel restrictions.
- 04.04 Arrange to secure permits required by the nature of the vehicle, its cargo and route to be traveled.
- 04.05 Arrange a secure place for vehicle on layovers, especially when transporting hazardous materials.
- 04.06 Demonstrate map reading skills.
- 04.07 Estimate travel time and plan rest stops and layovers.
- 04.08 Estimate fuel consumption and plan fuel stops.
- 04.09 Estimate expense money and obtain funds and/or credit cards.

05.0 DEMONSTRATE VEHICLE INSPECTION PROCEDURES--The student will be able to:

- 05.01 Check general appearance and condition of vehicle.
- 05.02 Check fuel, oil and water levels.
- 05.03 Check signal lights, stop lights and running lights.
- 05.04 Check tires, rims and suspension.
- 05.05 Check horn, windshield wipers, mirrors and reflectors.

05.06 Check fifth wheel, trailer hook up and brake lines.
05.07 Check emergency flares and fire extinguishers.
05.08 Check instruments for normal readings.
05.09 Check steering system, brake action and tractor protection valve.
05.10 Check cargo blocking, bracing and tie down.
05.11 Perform enroute inspections of mirrors, instrument panel, engine and power train, suspension system and brakes.
05.12 Perform post-trip inspection of vehicle and all systems.

06.0 PERFORM VEHICLE MAINTENANCE AND SERVICING PROCEDURES--The student will be able to:

06.01 Describe function and operation of key vehicle systems including engine, engine auxiliary, brake, drive train, coupling, suspension and electrical systems.
06.02 Service engine fuel, oil, coolant, battery and filters.
06.03 Check tire air pressure.
06.04 Change wheels (with tires mounted) and check for proper tire and wheel mounting.
06.05 Drain moisture from air brake supply reservoirs and fuel.
06.06 Check and adjust brakes.
06.07 Clean and repair lights.
06.08 Change fuses and reset circuit breakers.
06.09 Replace fan and alternator belts.
06.10 Clean interior and exterior of vehicle.
06.11 Check and replace mud/rain flaps.
06.12 Check and adjust CB radio, if so equipped.
06.13 Check and adjust tandem and fifth-wheel slides, if so equipped.

07.0 DEMONSTRATE BASIC VEHICLE CONTROL PROCEDURES--The student will be able to:

07.01 Place transmission in neutral before starting engine.
07.02 Start, warm up and shut down the engine, according to the manufacturer's specifications.
07.03 Build full pressure (90-120 PSI) in air tanks before starting.
07.04 Test parking brake and service brake before starting.
07.05 Coordinate use of accelerator and clutch to achieve smooth acceleration and avoid clutch abuse.
07.06 Maintain proper engine RPM while driving.
07.07 Properly modulate air brakes to bring vehicle to a smooth stop.
07.08 Shift up and down through all gears of all major types of conventional transmissions, including auxiliary transmissions and multispeed axles.
07.09 Double clutch and time shift for smooth and fuel efficient performance.
07.10 Select proper gear for speed and highway conditions.
07.11 Operate automatic and semiautomatic transmissions.

07.12 Coordinate steering, braking and acceleration to take the vehicle through a desired path forward and to back in a straight line.
07.13 Adequately judge the path trailer will take (off-tracking) as vehicle negotiates left or right curves and turns.
07.14 Use clutch and gears to slow vehicle.
07.15 Park the vehicle, set brakes and shut off the engine.
07.16 Properly chock/block wheels.

08.0 DEMONSTRATE BACKING, COUPLING AND UNCOUPLING SKILLS--The student will be able to:

08.01 Check area before backing.
08.02 Properly utilize guides and mirrors.
08.03 Properly back in straight line and curved paths.
08.04 Properly back into an alley dock.
08.05 Properly parallel park.
08.06 Park in a jackknife position.
08.07 Judge side, rear and overhead clearances and path of the trailer.
08.08 Apply the principles of reverse-steering an articulated vehicle.
08.09 Align the tractor properly to connect with trailer.
08.10 Secure the trailer against movement.
08.11 Back the tractor properly into the trailer kingpin without damage.
08.12 Perform mechanical and visual checks to make sure coupling is secure.
08.13 Connect electrical and air lines properly.
08.14 Set in-cab air brake controls properly.
08.15 Retract and secure landing gear after coupling is secure.
08.16 Properly uncouple and secure the trailer.

09.0 DEMONSTRATE BASIC VEHICLE MANEUVERS--The student will be able to:

09.01 Demonstrate ability to make a straight in approach to an alley.
09.02 Demonstrate ability to drive forward through an alley for 100 feet.
09.03 Demonstrate ability to properly stop the unit within 12 inches of the end of the alley.
09.04 Demonstrate ability to back 100 feet through an alley.
09.05 Demonstrate ability to properly stop the unit within 12 inches of the end of the alley.
09.06 Demonstrate ability to make proper straight in approach to multiple curves (serpentine).
09.07 Demonstrate ability to drive forward through curves (serpentine) while keeping tires inside of line.
09.08 Demonstrate ability to properly position unit for backing into a loading dock.
09.09 Demonstrate ability to properly back to a dock.
09.10 Demonstrate ability to properly stop unit within 12 inches of the dock without contacting dock.

09.11 Demonstrate ability to properly enter a weighing platform.
09.12 Demonstrate ability to properly maneuver double bottom trailers.

10.0 DEMONSTRATE ROAD DRIVING SKILLS--The student will be able to:

10.01 Carefully enter traffic from parked position.
10.02 Use clutch and gears properly.
10.03 Start without rolling backward.
10.04 Use mirrors properly.
10.05 Signal intention to turn well in advance.
10.06 Get into proper lane well in advance of turn.
10.07 Check traffic conditions and turn only when intersection is clear.
10.08 Restrict traffic from passing on right when preparing to complete a right hand turn.
10.09 Complete a turn promptly and safely and not impede other traffic.
10.10 Select and shift to proper gear prior to beginning any turn.
10.11 Obey all traffic signals.
10.12 Plan stop in advance and adjust speed correctly.
10.13 Use brakes properly on grades.
10.14 Plan stop far enough in advance to avoid hard braking.
10.15 Stop clear of crosswalks.
10.16 Come to a complete stop at all stop signs.
10.17 Yield right of way at intersections having yield signs.
10.18 Check for cross traffic regardless of traffic signals.
10.19 Enter all intersections prepared to stop if necessary.
10.20 Stop at a minimum of 15 feet but not more than 50 feet before railroad grade crossing if stop is necessary.
10.21 Select proper gear and do not shift gears on railroad grade crossing.
10.22 Allow sufficient space ahead for passing.
10.23 Pass only in safe locations.
10.24 Pass on two lane highway.
10.25 Pass on four or more lane highway.
10.26 Signal changing lanes before and after passing.
10.27 Warn driver ahead of intention to pass.
10.28 Pass only when appropriate to avoid impeding other traffic.
10.29 Return to right lane promptly, but only when safe to do so.
10.30 Observe speed limits.
10.31 Adjust speed properly to road, weather and traffic conditions.
10.32 Slow down in advance of curves, danger zones and intersections.
10.33 Maintain consistent speed where possible.
10.34 Yield right of way.
10.35 Allow faster traffic to pass.
10.36 Use horn only when necessary.
10.37 Park only in legally attained parking areas.
10.38 Check instruments at regular intervals.
10.39 Maintain proper engine RPM while driving.
10.40 Demonstrate ability to properly maneuver double bottom trailers on two lane and four lane highways.

11.0 DEMONSTRATE HAZARDOUS DRIVING SKILLS--The student will be able to:

11.01 Describe preparation for operation in cold weather, including activating the front brake limiting valve; removing snow and ice from windows, mirrors, brakes, lights, hand and toe holds, etc; and installing tire chains when necessary.
11.02 Demonstrate proper procedure for expelling moisture from the air tanks after each trip.
11.03 Describe proper procedure for checking ice accumulation on brakes, slack adjuster, air hoses, electrical wiring and radiator shutters during operation.
11.04 Describe operational adjustments necessary to maintain control in all weather conditions, including speed selection, braking and following distance.
11.05 Describe procedures to check safe operation of brakes after driving through deep water.
11.06 Perform proper use of windshield wipers, washers and defrosters to maintain visibility.
11.07 Demonstrate ability for observing road surface for changes in conditions.
11.08 Demonstrate ability for recognizing conditions that produce low traction, including initial rainfall, ice, snow and mud.
11.09 Describe procedures to avoid skidding and jackknifing.
11.10 Describe procedures to avoid hydroplaning and describe the road and vehicle conditions that produce it.
11.11 Describe procedures for mounting and dismounting tire chains.
11.12 Describe procedures for extricating the vehicle from snow, sand and mud by maneuvering or towing.
11.13 Demonstrate ability to adjust rate of change in speed and direction to road conditions to avoid skidding.
11.14 Demonstrate ability to coordinate acceleration and shifting to overcome the resistance of snow, sand and mud.
11.15 Demonstrate ability to perform checks on brake adjustment prior to mountain driving.
11.16 Demonstrate ability to use right lane or special truck lane going up grades.
11.17 Demonstrate ability to place transmission in appropriate gear for engine braking before starting downgrade.
11.18 Demonstrate ability to use proper braking techniques and maintain proper engine braking before starting downgrades.
11.19 Describe proper use of truck escape ramp, if available, when brakes fail on a downgrade.
11.20 Demonstrate ability to observe temperature gage frequently when pulling heavy loads up long grades.
11.21 Describe the effect of vehicle weight and speed upon braking and shifting ability on long downgrades.
11.22 Identify the meaning and use of percent of grade signs.
11.23 Demonstrate bringing the truck to a stop in the shortest possible distance while maintaining directional control on a dry surface.
11.24 Demonstrate a quick evasive turn on a dry surface.

11.25 Describe procedures to make an evasive turn off the roadway and return to the roadway while maintaining directional control.
11.26 Describe procedures to bring the vehicle to a stop in the event of a brake failure.
11.27 Describe procedures to maintain control of the vehicle in the event of a blowout.
11.28 Demonstrate ability to turn the steering wheel 180 degrees in either direction quickly while maintaining a grip on the steering wheel.
11.29 Describe procedures to bring tractor trailer to a stop in the shortest possible distance while maintaining directional control when operating on a slippery surface.
11.30 Describe procedures to recover from tractor or trailer skids induced by snow, ice, water, oil, sand, wet leaves or other slippery surfaces.
11.31 Describe procedures to countersteer out of a skid in a way that will regain directional control and not produce another skid.
11.32 Demonstrate ability to operate brakes properly to provide maximum braking without loss of control.

12.0 DEMONSTRATE EMPLOYABILITY SKILLS--The student will be able to:

12.01 Conduct a job search.
12.02 Secure information about a job.
12.03 Identify documents which may be required when applying for a job.
12.04 Complete a job application form correctly.
12.05 Demonstrate competence in job interview techniques.
12.06 Identify or demonstrate appropriate responses to criticism from employer, supervisor or other employees.
12.07 Identify and adopt acceptable work habits.
12.08 Demonstrate knowledge of how to make job changes appropriately.
12.09 Demonstrate acceptable employee health habits.

13.0 DEMONSTRATE AN UNDERSTANDING OF ENTREPRENEURSHIP--The student will be able to:

13.01 Define entrepreneurship.
13.02 Describe the importance of entrepreneurship to the American economy.
13.03 List the advantages and disadvantages of business ownership.
13.04 Identify the risks involved in ownership of a business.
13.05 Identify the necessary personal characteristics of a successful entrepreneur.
13.06 Identify the business skills needed to operate a small business efficiently and effectively.

PROGRAM IMPLEMENTATION

It is the teacher's responsibility to ensure that students learn how to competently perform the tasks specified in the course objectives. Therefore, the teacher must lead the students through the learning experiences in a course, motivate students, act as a role model for students, and at times, function as a guidance counselor and placement coordinator. This leadership role requires the teacher to participate in many of the activities required for program implementation. The teacher must select the methods of instruction that best apply to students' ability levels, measure student achievement and provide feedback. Key factors that must be considered when implementing this program are addressed below.

TEACHER CHARACTERISTICS

Subject Knowledge

The teacher must be a subject matter expert who is able to implement sound instructional methods and evaluate student performance. He/she must have significant work experience in the industry/vocational field and be able to communicate that knowledge to the students.

Instructional Delivery

The teacher's role in the learning process is to motivate and lead the student as well as impart subject matter knowledge. In order to maximize student learning, the use of a variety of instructional methods is encouraged. Because teaching styles vary greatly, teachers are highly encouraged to "pick and choose" from various methods or to combine methods for maximum benefit to students. Some of the more traditional methods used are lecture, demonstration and small group instruction. Other teaching methods which are suggested for further exploration include individualized self-paced, open-exit/open-entry, contract, computer based and competency based instruction. The focus of Competency Based Vocational Education (CBVE) is to ensure that each student can competently perform tasks specified before progressing to more complex skills.

CONVENTIONAL INSTRUCTIONAL METHODS

A vocational program may require a portion of the instruction to be presented in a standard lecture or controlled demonstration format. These methods of instruction can be easily combined with instructor controlled step-by-step practical exercises. Some instructional activities may dictate that this instructional approach be used to introduce students to hazardous equipment often utilized in vocational training. In most situations, students should be required to perform specified activities to achieve maximum skill competency. If mastery of a task is required, competency based education methods may be more appropriate. However, if the training activity involves an orientation or a seldom performed, non-essential task, conventional instructional methods may be more effective. Teachers are encouraged to use a variety of instructional methods to best meet instructional objectives.

Instructional Development

Teachers often must develop and select their own teaching and curriculum materials. In developing a comprehensive curriculum, instructional objectives based upon both the performance and cognitive domain must be included. When developing curriculum materials, teachers must use the curriculum framework (CF) and student performance standards (SPS) contained in this program guide as a basis. These materials delineate minimum program content which must be presented for an approved vocational training program. However, they are not intended for use as a comprehensive curriculum. Be certain not to adapt the curriculum to available materials, but select only those materials which can be adapted to the curriculum.

Instructional Measurement

Teachers must select testing methods that support the instructional delivery system used. Teachers must be competent to develop, administer and evaluate written and performance type tests.

Student Admissions Criteria

Providing the student the opportunity to successfully complete a vocational education program, in any institution, should be the primary concern of the instructional effort. Therefore, it is very important to direct planning and effort into identifying and selecting students with excellent potential for success in the educational program and in the occupation. The school's primary task is to prepare people for fulltime, entry-level positions as technicians or, in the case of those with more experience, as managers.

The Course Code Directory, specifies grade levels at which occupational programs are offered. Specific student admissions criteria which is required by the State and local educational agencies for the Commercial Vehicle Driver training program is illustrated as follows.

SPECIFIC ADMISSIONS CRITERIA

Minimum Age (Federal DOT Requirement):	21
Physical Requirements:	Pass DOT physical exam
Special Requirements:	Must obtain valid chauffeur's license
	Must present a list of all motor vehicle accidents in which applicant was involved during past three years, specifying date and nature of each accident and fatalities or personal injuries
	Must present a list of all violations of motor vehicle laws (excluding parking violations) of which applicant was convicted or forfeited bond or collateral during past three years
	Must present a detailed statement of facts and circumstances of any denial, revocation or suspension of any license to operate a motor vehicle, or a statement that no such denial, revocation or suspension has occured
Minimum Basic Skills Math Level:	* NA
Minimum Basic Skills Language Level:	* NA

* This grade level requirement is specified in the Curriculum Framework and is applicable to postsecondary level programs of 450 hours or more only. There is no minimum basic skill requirement for secondary programs.

THE STUDENT PROFILE

Developing a student profile is an important step in program implementation. Attention should focus on student characteristics that can be remediated within a training program, but could create serious impediments to success in the vocational field. Typical of these would be deficiencies in communications and mathematical skills. The basic skill levels can be measured by testing. Test results can then be used to direct the student to more suitable training which matches his or her skill level, or to determine supplemental training which may be required to increase chances for student success.

High school and postsecondary vocational students can be admitted to a vocational program upon request if they meet any specified prerequisites, such as physical or basic skill requirements. Training programs should be accessible to as many students as possible. Training programs are designed to prepare students for employment upon graduation, or serve as prerequisite to a postsecondary program.

The community college can be more selective and establish stringent admission standards. This may be done by assessing applicants or by recruiting potential students who meet the established prerequisite requirements of the training. The program advisory committee can design a profile of the potentially successful student. The profile should contain a list of qualities, traits and aptitudes that will indicate a higher potential for student success. Acceptable levels for these traits must also be determined. For example, the qualities deserving highest attention, mechanical ability and cognitive aptitude, are those which the educational program itself will not likely be able to influence, although these traits should have considerable weight in establishing the basic profile. Deficiencies in mathematical or communications skills may lend themselves to improvement through related instruction while the student is enrolled in the program. The following example illustrates specific qualities to consider when establishing the student profile:

Mechanic/Technician--Service

- Knowledge of basic tools and equipment used by mechanics/technicians
- Ability to analyze and solve mechanical and technical problems
- Ability to interpret written mechanical/technical materials
- Ability to interpret mechanical/technical drawings
- Mechanical dexterity

Mechanic/Technical Service Management

- Basic application of service
- Business skills
- Ability to work with people
- Communications skills
- Leadership

QUALIFYING AND PRETESTING

Assessing potential students for vocational programs is an integral part of the recruiting process since considerable amounts of time and money will be spent on students entering training. Recruiters must have a good idea of the candidate's basic aptitude. Whoever guides the candidate to the program needs to have knowledge of the student's interests, abilities and experience. These can be measured by a variety of assessment methods, which should be performed upon program entry. The assessment can help determine extent and level of training each individual should receive.

Assessment should determine the level at which the student can read, write, calculate mathmatics and understand the English language. It is appropriate for the program advisory committee and the school to develop some selection criteria based on minimum skill levels. These criteria should remain flexible in order to maximize educational opportunity for all applicants. Additionally, vocational educators must make every effort to serve the variety of "special needs" students and to eliminate sex-bias and stereotyping in all occupational areas.

For the commercial vehicle driver training program, proficiency in the English language is a recommended training prerequisite prescribed by the Federal Highway Administration. This is necessitated by the driver's having to understand road signs and the vast amount of trip reports that must be completed.

ADVISORY COMMITTEE

It is imperative that representatives of industry be organized into an advisory committee. Constantly changing technological demands of our society will continue to stimulate changing industrial patterns. Therefore, effective use of program advisory committees is vital to the successful implementation of vocational training programs. Advisory committees provide expert technical advice which is not easily obtainable elsewhere, offer external support of policies and have tremendous public relations potential.

The most effective advisory committees are those whose members have mutual respect for each other's abilities and vested interest in the training program because of their need for trained workers. The program advisory committee is also one of the most effective means of facilitating placement. Its role can be:

- To contact local industry and encourage them to use the school's placement office as a means of filling jobs
- To develop an effective procedure for interviewing and evaluating potential employees suggested by the school
- To assist in gathering accurate and current job information as it becomes available

COUNSELING AND GUIDANCE

Counseling of students serves two purposes. It guides the student into the program and it supports enrolled students on a continuing basis throughout the program. Much day-to-day counseling will be the responsibility of the teacher. The teacher has the most contact with the student and is in a position to detect and correct a problem. Each student will encounter new problems as the program develops. The teacher's job is to work with the student to help identify problems and then strive for solutions. The teacher will provide much of the counseling that focuses on trade knowledge and skills.

The professional counselor cannot be expected to have the subject matter expertise of the primary teacher. The counselor, however, can focus on the student's needs related to other issues such as personal growth, interests and attitudes. The ideal situation will provide at least one counselor with current knowledge of industry standards for career counseling. A useful tool which should be used in the counseling process is the Career Merit Achievement Plan (Career MAP) which presents minimum instructional content keyed to student performance standards. Career MAPs are available for each industrial program area, and can be used to document student achievement, isolate student interests, talents and weaknesses. They are also useful for placement purposes. Information on Career MAPs may be obtained by contacting the Department of Education, Division of Vocational, Adult, and Community Education, (904) 488-0484.

STUDENT PLACEMENT

Implementing an effective placement system is integral to developing a successful vocational training program. **S.B.E. Rule 229.551 (3)(g)** requires 70 percent placement of students who have completed a vocational training program. Although placement is not always a problem, as with students

already working in a related occupation, the placement program should place emphasis upon students who are seeking entry-level employment since these students have little or no experience with industry.

The task of the placement program is to locate job openings in the community. The placement coordinator or teacher must know each student's personal aims and interests in addition to the information stated on the achievement record. In many cases, teachers are the best source to match students to job openings because of their contacts with the industry advisory committee. Input concerning employment openings must come from individual business establishments in the community. The placement coordinator should introduce a student to as many suitable job openings as possible. Conversely, employers can then be expected to interview as many qualified candidates as possible.

Cooperative Education

COOPERATIVE EDUCATION APPLICABILITY

Normally, students will complete the entire program as full-time students before obtaining employment. However, there may be situations where students could be allowed to complete part of the program while employed in their occupational areas. At this time it is appropriate for the student to enroll in industrial cooperative education (ICE). Guidelines for this training plan are provided in the "Industrial Cooperative Education Program Guide," published by the Division of Vocational, Adult, and Community Education, Order # IE 508 BK 87.

Industrial cooperative education is a method of instruction designed to prepare students for jobs in the community. This method is a joint effort between the school and the business community. Student trainees receive a combination of instruction in the classroom and related on-the-job training through employment. Learning experiences are jointly planned and supervised by the teacher and the employer. Cooperative education is relevant to the needs of the student preparing for a work role, and will help the student to achieve success and personal satisfaction as the transition is made from school to the constantly changing world of work.

Cooperative education is defined in the Federal Register, Volume 39, number 143, Vocational Education, Section 102.96, as a program ". . . to prepare students for employment, through: (a) providing meaningful work experiences combined with formal education enabling students to acquire knowledge, skills, and appropriate attitudes, (b) removing the artificial barriers which separate work and education, (c) involving educators with employers, creating interaction whereby the needs and problems of both are made known, thereby making it possible for occupational curricula to be revised to reflect current needs in various occupations . . . ."

PURPOSE

Cooperative Education is for persons who, through written cooperative arrangements between the school and employers, receive instruction, including required academic courses and related instruction by alternation of study in school with a job in any industrial occupational field. These two experiences must be planned and supervised by the school and employers so that each contributes to the student's education and employability. Work periods and school attendance may be on alternative half days, full days, weeks or other periods of time to fulfill objectives of the cooperative education program.

GOALS AND OBJECTIVES

The primary goal of the cooperative method of vocational education is to prepare skilled, responsible individuals who can assume a productive role in the community. Specific objectives to meet the primary goal are:

- To prepare individuals for employment, adjustment and advancement in specified occupations or occupational areas (primary objective)
- To provide an understanding of the contribution of work to the social and economic welfare of our nation
- To provide students with an understanding and appreciation of the American free enterprise system
- To foster an awareness of the civic, social and moral responsibilities of individuals to society
- To stimulate students' interest in their chosen occupational fields and provide an understanding of the opportunities in each field
- To provide training that results in increased efficiency in performing job tasks
- To provide curriculum which is sensitive and adaptable to changes in occupational practices and procedures as they are affected by societal, economic, technical and educational developments
- To strive to develop a greater appreciation of the value of specifically trained personnel among employers, employees and consumers
- To reinforce skills learned in the school laboratory
- To provide experiences on tools and equipment not available in the school laboratory
- To supplement and broaden the school curriculum into areas not otherwise available

Student Organization Participation

Vocational student organizations operate pursuant to federal and state laws, which authorize them as viable components of vocational education programs. According to federal regulations, the vocational education program of instruction may include activities of vocational student organizations which are an integral part of the vocational instruction offered and which are supervised by vocational education personnel. The **S.B.E.** Rules authorize vocational student organizations as an integral part of the vocational education program as stated in **S.B.E. 6A-6.064 (7)** and **6A-6.065 (8).**

VOCATIONAL INDUSTRIAL CLUBS OF AMERICA (VICA)

VICA is an organization for secondary or postsecondary students enrolled in trade and industrial education programs in high schools, area vocational technical centers and junior and community colleges. It is the only national and international organization for trade and industrial students. The organization is designed to expand and enrich opportunities for leadership, social awareness and civic responsibility in vocational students.

Students who participate in VICA activities are often better prepared for the world of work. They acquire knowledge of the many opportunities available in their chosen careers and become aware of the value of their contributions to society. They are also given opportunities to develop and utilize their talents and abilities in ways that otherwise would not be available to them.

BENEFITS OF VICA MEMBERSHIP FOR THE STUDENT

Membership in VICA offers the student the opportunity for growth and development in the following areas:

School and Community Service Activities Students in VICA become involved in various school and/or community services. These may include clothing or food collections for the needy, donation of time and service to the elderly and participation in fund raisers or similar activities.

Social Interaction with Fellow Students Activities are also available that offer students time for relaxation and fun. Social activities of this type may be held on a regular basis. They might be held on the school campus during school hours, or off campus after school. More formal functions would include end of the year award banquets or industry/employer appreciation dinner banquets.

Competition in Skill and Leadership Contests VICA offers various contests in all the skill and leadership areas it serves. Often, teachers identify talented students who represent their school in regional competitions. However, any student member of VICA may compete. Instructors should conduct planned contests within their trade areas. This also pertains to leadership areas. First and second place regional winners then move on to the state level contest. The state winners then compete at the national level of the United States Skill Olympics.

INSTRUCTIONAL RESOURCES

STUDENT REFERENCE MATERIALS

Necessary instructional texts or pertinent material should be available for each student to satisfy training objectives. When textbooks are used, the copyright date should be as current as possible.

SERVICE MANUALS

Manuals with current manufacturer's service procedures and specifications should be available. These manuals must be located where students can use them while working in the shop area.

PERIODICALS

Current general and technical magazines and newspapers should be available for student and instructor use.

The following list of suggested resources is organized under each outcome shown in the curriculum framework. These resources have been recommended by instructors and program administrators through statewide surveys.

01.0 DESCRIBE VEHICLE SAFETY AND ACCIDENT PREVENTION PROCEDURES

TITLE	PUBLISHER	TYPE
ERA of Pioneers	J.J. KELLER & ASSOC.	film
Fire Extinguisher Use	J.J. KELLER & ASSOC.	film
What To Do In Case of an Accident	J.J. KELLER & ASSOC.	film
Accident Facts	NATIONAL SAFETY COUNCIL	text
Federal Motor Carrier Safety Regulations Handbook	J.J. KELLER & ASSOC.	text
Federal Motor Carrier Safety Regulations Pocketbook	J.J. KELLER & ASSOC.	text
Guide for Teacher Preparation in Driver Education, Driving School Education	U.S. DEPARTMENT OF TRANSPORTATION, National Highway Traffic	text
Model Curriculum for Training Tractor Drivers (#050-001-002931-1)	U.S. GOVERNMENT PRINTNG OFFICE	text
Motor Carrier Safety Report Series	J.J. KELLER & ASSOC.	text
Motor Fleet Safety Manual	NATIONAL SAFETY COUNCIL	text
Trucking Safety Guide	J.J. KELLER & ASSOC.	text
Trucking: A Truck Driver's Training Manual	CAREER PUBLISHING, INC.	text

02.0 COMPLY WITH VEHICLE OPERATING REGULATIONS

TITLE	PUBLISHER	TYPE
Driver's Daily Log Books	J.J. KELLER & ASSOC.	text
Facts for Drivers	AMERICAN TRUCKING ASSOCIATIONS, INC.	text

National Professional Truck Driver Training	NATIONAL TRUCK DRIVER TRAINING, INC.	text
Standard for Curriculum/Instructional Materials Developed for Students	DISSEMINATION UNIT, Div. of Vocational, Adult, and Community Education Florida Dept. of Education	text
Tractor-Trailer Driver Training Standard-- Recommended Practice Phase	U.S. DEPARTMENT OF TRANSPORTATION Bureau of Motor Carrier Safety	text
Trucking Manual	FLORIDA DEPARTMENT OF TRANSPORTATION	text
U.S. Government Code of Federal Regulation: #49 - Transportation	U.S. GOVERNMENT PRINTING OFFICE	text

03.0 DEMONSTRATE PROPER CARGO HANDLING AND DOCUMENTATION PROCEDURES

TITLE	PUBLISHER	TYPE
Bill of Ladings	J.J. KELLER & ASSOC.	film
Hazardous Materials	J.J. KELLER & ASSOC.	film
Driver's Pocket Guide to Hazardous Materials	J.J. KELLER & ASSOC.	text
Hazardous Materials Guide	J.J. KELLER & ASSOC.	text
Hazardous Materials Handbook for Motor Carriers	J.J. KELLER & ASSOC.	text
Interstate Motor Carrier Forms Manual	J.J. KELLER & ASSOC.	text
Trucking Permit Guide	J.J. KELLER & ASSOC.	text
Vehicle Sizes and Weights Manual	J.J. KELLER & ASSOC.	text

04.0 DEMONSTRATE PRE-TRIP PREPARATION PROCEDURES

TITLE	PUBLISHER	TYPE
Driver's Logs	J.J. KELLER & ASSOC.	film
Driver's Pre-Trip (Vehicle Inspections)	J.J. KELLER & ASSOC.	film
Hours of Service	J.J. KELLER & ASSOC.	film

05.0 DEMONSTRATE VEHICLE INSPECTION PROCEDURES

TITLE	PUBLISHER	TYPE

None

06.0 PERFORM VEHICLE MAINTENANCE AND SERVICING PROCEDURES

TITLE	PUBLISHER	TYPE

None

07.0 DEMONSTRATE BASIC VEHICLE CONTROL PROCEDURES

TITLE	PUBLISHER	TYPE

None

08.0 DEMONSTRATE BACKING, COUPLING, AND UNCOUPLING SKILLS

TITLE	PUBLISHER ADDRESS	TYPE
Coupling & Uncoupling	J.J. KELLER & ASSOC.	film

09.0 DEMONSTRATE BASIC VEHICLE MANEUVERS

TITLE	PUBLISHER	TYPE
Driving Grades	J.J. KELLER & ASSOC.	film
Vehicle Backing	J.J. KELLER & ASSOC.	film

10.0 DEMONSTRATE ROAD DRIVING SKILLS

TITLE	PUBLISHER	TYPE
What Lies Ahead	J.J. KELLER & ASSOC.	film

11.0 DEMONSTRATE HAZARDOUS DRIVING SKILLS

TITLE	PUBLISHER	TYPE
Extreme Driving Conditions	J.J. KELLER & ASSOC.	film
Night Operation & Driving	J.J. KELLER & ASSOC.	film

12.0 DEMONSTRATE EMPLOYABILITY SKILLS

TITLE	PUBLISHER	TYPE
Applying for a Job - Instructor's Guide (CE 004 BK 81)	FLORIDA DEPARTMENT OF EDUCATION, DIVISION OF VOCATIONAL EDUCATION	instructor text
Job Changes - Instructor's Guide (CE 025 BK 84)	FLORIDA DEPARTMENT OF EDUCATION, DIVISION OF VOCATIONAL EDUCATION	instructor text
Personal Finances - Instructor's Guide (CE 030 BK 84)	FLORIDA DEPARTMENT OF EDUCATION DIVISION OF VOCATIONAL EDUCATION	instructor text

Employability Skills Series (ESS) (CE 001 SS 81)	FLORIDA DEPARTMENT OF EDUCATION DIVISION OF VOCATIONAL EDUCATION	module
Applying for a Job - Student Guide (CE 003 BK 79)	FLORIDA DEPARTMENT OF EDUCATION DIVISION OF VOCATIONAL EDUCATION	student text
Job Changes - Student Guide (CE 024 BK 84)	FLORIDA DEPARTMENT OF EDUCATION DIVISION OF VOCATIONAL EDUCATION	student text
Personal Finances - Student Guide (CE 029 BK 83)	FLORIDA DEPARTMENT OF EDUCATION DIVISION OF VOCATIONAL EDUCATION	student text
A Guide to Employability Skills Materials (C042 BK 85)	FLORIDA DEPARTMENT OF EDUCATION DIVISION OF VOCATIONAL EDUCATION	text
ESS for Success (CE 150 BK 84)	FLORIDA DEPARTMENT OF EDUCATION DIVISION OF VOCATIONAL EDUCATION	text
Standards for Selection of Truck Fleet Personnel	AMERICAN TRUCKING ASSOCIATIONS, INC.	text

13.0 DEMONSTRATE AN UNDERSTANDING OF ENTREPRENEURSHIP

TITLE	PUBLISHER	TYPE
Occupational Outlook Handbook	U.S. DEPARTMENT OF LABOR Bureau of Labor Statistics	text
Voluntary Truck and Bus Fuel Economy Improvement Program		text

PUBLISHERS' ADDRESSES

AMERICAN TRUCKING ASSOCIATIONS, INC.
2200 Mill Road
Alexandria, VA 22314

CAREER PUBLISHING INC.
Orange, CA

FLORIDA DEPARTMENT OF
EDUCATION, DIVISION OF
VOCATIONAL EDUCATION
Knott Building
Tallahassee, FL 32399

J.J. KELLER & ASSOC.
145 West Wisconsin Avenue
Neenah, WI 54956

NATIONAL SAFETY COUNCIL
Old Executive Office Building
Washington, DC 20506

U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
441 G Street Northwest
Washington, DC 20212

U.S. DEPARTMENT OF TRANSPORTATION
Bureau of Motor Carrier Safety
400 7th Street Southwest
Washington, DC 20024

U.S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic
400 7th Street Southwest
Washington, DC 20024

U.S. GOVERNMENT PRINTING OFFICE
North Capital & H Streets Northwest
Washington, DC 20002-4202

FACILITIES

Facility Design Recommendations

Facilities, tools and equipment are essential parts of training programs, and must be designed to meet State program standard requirements and instructional objectives. This section of the Program Guide contains information for setting up classroom and laboratory facilities. Facility design criteria and space requirements are specified in **S.B.E. Section B, Chapter 6A-2.**

TEACHING FACILITIES

The instructional environment should duplicate, as closely as possible, the real-life work environment the student will enter after graduation. The more the school resembles the industrial environment, the easier it will be for the student to make the transition from school to work. Tools, supplies and equipment should conform to local industry standards. The teacher should actively pursue supplemental resources to expose the students to state-of-the-art equipment.

All facilities should include classroom space, as well as space for regular classroom equipment such as audio-visual equipment. Laboratory facilities should be equipped with work stations or workbenches, tables, chairs and special training aids to demonstrate basic principles and theory. They should contain enough tools and equipment to enable several students to work individually on the same learning activity.

UPDATING FACILITIES

To keep pace with technological changes and improvements, facilities must be updated on a continuing basis. When planning facilities, priority must be to provide space which will fulfill changing needs of the instructional program. Buildings should be designed with flexibility to expand in order to accomodate future program changes and to allow for greater ease of facility updating. The program advisory committee should be used to assist

the school in establishing priorities for obtaining facilities, tools and equipment. Careful planning and analysis of current and future needs will lead to the establishment of an effective training environment.

SCHOOL FACILITIES

This section of the program guide provides general guidelines for range and vehicle service facilities. These specifications are recommended by "Proposed Minimum Standards for Training Tractor-Trailer Drivers," U.S. Department of Transportation, Federal Highway Administration, Bureau of Motor Carrier Safety, 1984.

Range Facilities

A driving range for teaching basic vehicle control and operation is required and is the only practical way to operate a training program.

Dimensions The size and characteristics of the range will vary according to the exercises to be carried out.

Single Range The learning activities of the Commercial Vehicle Driving curriculum, including skid pan training, require a range facility with a minimum paved area 900 feet by 150 feet. This includes an area 300 feet by 150 feet as a recommended minimum area for a skid pan with an in-line approach lane 600 feet long for acceleration. A safety perimeter of approximately 25-50 feet is also recommended.

Supplemental Facilities While awaiting range construction, a school may use a supplemental area to conduct the initial lessons in putting a vehicle in motion. Range areas suitable for temporary use can be found in commercial or municipal parking lots, schools, national guard armories, military posts or abandoned air strips.

Structures A refueling structure similar to a small commercial gas station is necessary to refuel tractors. This structure may consist of a 4 foot by 4 foot concrete block building with a roof extending over the vehicle driveway and gas pumps for gasoline and diesel fuel. Engine oil refilling equipment and coolant supplies and equipment should be available at this refueling structure. Fire extinguishers

must be available at this structure. Fuel storage tanks can be placed below or above ground. If tanks are placed below ground, precautions must be taken to insure that the tanks do not leak and allow the fuel to become contaminated. In addition to permanently installed tanks, portable tanks are desirable for emergency refueling of vehicles on the road.

Support Equipment An auxiliary power unit or battery jumping equipment is necessary to start vehicles with dead batteries. This equipment should be portable for use on stalled vehicles on the range or on the road. Tire changing tools and equipment along with spare tires must be available to take to vehicles operating on the range or on the road.

Range Barricades and Markers The following items are recommended to support a range which operates four vehicles simultaneously.

Barricades Four fixed barricades 4 feet high and 10 feet wide are required. They may be constructed of 1 x 4's or other suitably sized lumber. While barricades may be larger than these minimum dimensions, they should not be smaller. A 10 foot minimum width is required to permit the driver to view both edges of the barricade simultaneously through the left and right rear view mirrors. A four foot minimum height is required for the barricade to be in view of the mirrors at all times. Barricades shorter in height cannot be viewed in rear view mirrors under all circumstances.

Stanchions Twelve stanchions are required. They are used to mark range maneuver boundaries, critical points and turn points. Stanchions may be constructed of traffic cones, 24 inches high in which a four foot dowel is inserted. A height of four feet is needed to assure visibility. A red or orange flag is attached to the upper end of the dowel. Stanchions constructed in this manner are portable, highly visible and resistant to damage.

Barrels Minimum requirements are for three barrels. Barrels should be 55 gallons in capacity and are used as pylons in serpentine range maneuvers where there is a high likelihood that the marker will be struck.

Traffic Cones Ten dozen traffic cones, 24 inches high, are needed for constructing stanchions and marking exercise paths.

Curbings Fifty feet of curbing is desirable for parking exercises because it does not require resetting as do cones. Curbing can consist of railroad ties, portable concrete curbing or other similar material. It should be a minimum of 8 inches high.

CLASSROOM/LABORATORY FACILITIES

Space requirements for new facility construction for this program are specified in **S.B.E. Rule 6A-2.032** as shown below.

NEW FACILITIES COMMERCIAL VEHICLE DRIVING	
Occupant Design Stations	16
Net Square Feet Per Occupant	
Minimum	31
Normal	33
Maximum	35
Total Net Square Feet	
Minimum	496
Normal	528
Maximum	560

VEHICLE EQUIPMENT REQUIREMENTS

The following vehicle equipment recommendations are excerpted from "Proposed Minimum Standards for Training Tractor-Trailer Drivers," U.S. Department of Transportation, Federal Highway Administration, Bureau of Motor Carrier Safety, 1984.

All vehicles used for street training must meet all applicable state and federal requirements for operation on public roadways, including state registration, payment of use taxes and other special taxes, inspection requirements, safety and auxiliary requirements and insurance. Vehicles used only for range training are not required to comply with these requirements or to carry the same amount of insurance. However, all tractors must be in good mechanical condition and meet minimum safety requirements. All vehicles must be equipped with occupant restraint systems.

Cab-over-engine and conventional tractors are required to familiarize students with important differences such as handling characteristics, turn points, turning radii and front-view perspective. Three engine types are recommended. These are two and four cycle diesel and gasoline. At least one tractor engine should be equipped with an engine brake retarder. At least one tractor in the range training segment of the fleet should be equipped with an air brake pressure application gage to aid students to make smooth stops.

Transmissions should provide a range of seven to thirteen forward speeds and should include multi-range transmission, auxiliary gearbox and multi-speed gearboxes. At least one tractor in the training fleet should be equipped with a single drive axle and one with a tandem drive axle. In addition, at least one tractor should be equipped with a standard leaf spring suspension system and one with an air cushion suspension.

In street training vehicles, it is important to mount at least one convex mirror to the right side mirror bracket to permit the instructor to monitor trailer position during curves and turns. It is also recommended to mount a separate tachometer in view of the instructor's seat position to allow accurate monitoring of student performance during upshifts and downshifts.

WORK STATION ARRANGEMENT

The arrangement of work stations and specialized equipment depends upon the general layout of the facilities, but careful consideration must be given to convenience to entrances and exits, easy movement among service benches and a parts or tool room. The tool room should have a counter convenient to work stations. Overall layout of the service facility should be planned so that the location of entrances and exits permits a logical flow of work in progress. One of the most critical factors in planning a facility is the arrangement of benches to obtain a safe, efficient traffic pattern.

ADDITIONAL FACILITY CONSIDERATIONS

Training Stations

Training stations and live work areas must be available in the type and number required to meet program goals and performance objectives.

Instructional Area

A classroom or designated area of the laboratory should be available for lecture, instruction, viewing audio visual materials and other nonshop activities.

Personal Tool/Equipment Storage Area

A secure storage room or area should be provided, with enough shelf space for student supplies/tool boxes and floor space for equipment.

General Storage

Storage areas for tools, parts, supplies and machines must be sufficient to support the activities outlined in the program goals and performance objectives.

Office Space

An area separate from the classroom and laboratory should be available and convenient for use by the instructor(s) as an office.

Maintenance

A regular facilities maintenance program must be implemented to ensure that equipment and facilities are safe and usable to meet instructional needs.

Housekeeping

The classroom, laboratory and support area(s) must be kept clean and orderly.

Ventilation

A fume/dust removal system should be in place and operable. When appropriate, heating and cooling systems should be used to provide sufficient comfort for learning. Ventilation requirements are stated in **S.B.E. Rule 6A-2.066.**

First Aid

A first aid station must be in place, well marked and complete with appropriate supplies.

Support Facilities

Restrooms, clean-up areas and lockers convenient to the shop should be available for students.

Safety

The facilities must meet all Occupational Safety and Health Administration (OSHA) safety standards, where applicable.

Facility Evaluation

The program advisory committee should be asked to conduct an annual evaluation of the facilities to insure the program's continuing capability to meet instructional objectives.

Safety, Maintenance and Liability

SAFETY

S.B.E. Rule 6A-2.097

The Florida State Board of Education establishes rules for the operation of public schools. **Part III, Section B, Chapter 6A-2** of the State Board of Education Rules contains the standards for existing educational facilities. Subsections deal with the entire school facility in regard to such topics as electrical equipment, flammable materials, ventilation, fire safety, storage and illumination. Subsection 6A-2.097 contains safety regulations pertaining to vocational classes.

Safety Equipment For CVD Programs

The following safety recommendations are taken from "Proposed Minimum Standards for Training Tractor-Trailer Drivers," published by the U.S. Department of Transportation Federal Highway Administration, Bureau of Motor Carrier Safety, 1984.

All road training vehicles must be equipped with items specified in Part 393 of the Federal Motor Carrier Safety Regulations, in addition to fire extinguishers, fuses, emergency flares, emergency reflectors and warning flags. Each vehicle must carry a first aid kit, safety cables or chains and a vehicle logbook. It is recommended that each vehicle be equipped with a Citizen's Band (CB) radio.

Range vehicles must be equipped with a fire extinguisher. Other required equipment includes tiedowns of various types, wheel chocks, tire changing equipment and spare wheel/tire mounted on rim and inflated to proper presssure. Safety equipment for range training vehicles includes communication equipment. Hand-held CB radio units are recommended to insure maximum safety and learning any time that more than one vehicle is operating on the training range. An instructor responsible for supervising more than one vehicle at a time should communicate with all drivers over the same channel, identifying each vehicle by number. Different instructors should use different channels. Recommended safety equipment also includes instructor trolley brake, antijacknife device, light bar and skid tires.

A separate trolley brake mounted in a position accessible from the right side seat may be used by the instructor to "lock-up" rear tractor or trailer wheels to induce skids. In some skid recovery programs, the instructor has a brake control that can selectively brake trailer wheels, drive wheels and front wheels to induce various types of skids. The antijacknife device should not prevent a jacknife, but only excessive trailer swing and damage to tractor or trailer. The trailer must be free to jackknife for students to learn. The light bar or other flashing beacon should be mounted on the skid pan training vehicle. It should be amber in color and visible in

normal daylight from a distance of 500 feet. Tractor steering axle tires should be treaded and in good condition.

Marking of Hazardous Areas

Floors, walls, posts, stationary objects, machinery and equipment should be properly painted, marked, coded or identified, according to recommended safety practices of OSHA, the school board and industry.

Emergency Procedure For Injuries

The following procedures are recommended in the event of an injury or sudden illness in a student:

- Refer to the red "fire or medical emergency" signs posted in appropriate areas.
- Provide immediate first aid if so qualified.
- Notify appropriate personnel to advise them of the problem. They can also contact emergency trained personnel on campus.
- A conscious person has the right to refuse treatment and/or transportation to a medical facility.
- Advise students that they will be financially responsible for ambulance and emergency care.
- The paramedics will assume patient care upon arrival.
- If emergency transportation is not indicated, the student may spend time at the clinic, be allowed to go home or go to a medical facility.
- Be sure to complete the appropriate student injury form for any and all accidents or sudden illness.

MAINTENANCE

Vehicle Service Facilities

Schools should have the necessary facilities for routine maintenance. At a minimum, this should include a sheltered garage area sufficient to permit servicing of tractors in all weather and supplies needed to maintain vehicles. Service facilities should provide access to the vehicle from below. This may be either a pit or a lift. The advantages of a pit are easier servicing of most vehicle components, lower cost and ability for students to examine underside of vehicle without disruption. This is optional if service or repair work is contracted out. Commercial vehicle driver training programs must implement a service and maintenance agreement

to ensure safety of all equipment and vehicles used in training. Maintenance can be performed through the school's automotive mechanic, heavy duty bus and truck mechanic program or through an outside service agency.

VOCATIONAL TEACHER LIABILITY

Liability of Teacher and School Board

Negligence of vocational education teachers can cause unnecessary injury, and may result in teacher and school district liability. Vocational teachers are recommended to carry personal liability insurance. To reduce the risk of liability and injuries, the following suggestions are provided.

- Follow accepted policies of the school board.
- Do not allow students to use equipment or tools which have not been approved by the administration and Board of Education.
- Establish safety rules and enforce them.
- Do not leave the shop/laboratory while students are working.
- Do not permit non-enrolled students to use the shop/laboratory.
- Do not allow students to use machines or tools for which instruction has not been given.
- Do not approve unsupervised student activities inside or outside the shop/laboratory.
- Prepare accident forms for all accidents.
- Regularly inspect the workplace and equipment for defects or potential hazards and maintain documentation of unserviceable or hazardous items.
- Consider age, maturity, skill and ability of students when providing instruction and supervision.
- Adminster safety tests to students upon completion of the demonstration of a specific machine, tool or process, and keep documentation on file in your office.
- Require all students to wear eye protection devices, when appropriate, for laboratory activities.

SUGGESTED EQUIPMENT LIST

General Classroom Equipment

DESCRIPTION

Chalkboard

Bulletin board

Bookcases

Cabinet-storage

Student study stations

Audio-visual equipment as needed

Laboratory Tools and Equipment

These tools and items of equipment are normally used in this program. Equipment items are listed under each outcome, corresponding to the curriculum framework. Consumable supplies should be readily available to assure continuous instruction. Consumable supplies such as solvent, motor oil and fuel are not contained in the equipment list.

01.0 DESCRIBE VEHICLE SAFETY AND ACCIDENT PREVENTION PROCEDURES

EQUIPMENT DESCRIPTION

Fire extinguisher, CO_2 and dry chemical

02.0 COMPLY WITH VEHICLE OPERATING REGULATIONS

EQUIPMENT DESCRIPTION

Pocket calculator
Driver's status log books

03.0 DEMONSTRATE PROPER CARGO HANDLING AND DOCUMENTATION PROCEDURES

EQUIPMENT DESCRIPTION

Cargo blocking, bracing, strapping equipment
Cargo handling equipment, dolly
Cargo handling equipment, forklift
Cargo handling equipment, handtruck
Hazard/safety markers, flags
Tie-down chains
Vehicle scales set, if available

04.0 DEMONSTRATE PRE-TRIP PREPARATION PROCEDURES

EQUIPMENT DESCRIPTION

Road atlas or map

05.0 DEMONSTRATE VEHICLE INSPECTION PROCEDURES

EQUIPMENT DESCRIPTION

Tire pressure gage
Inspection checklist/clipboard

06.0 PERFORM VEHICLE MAINTENANCE AND SERVICING PROCEDURES

EQUIPMENT DESCRIPTION

Air compressor, air lines, adequate number of extractors, regulators
Air hoses, quick release couplings
Air regulators, at each air tip
Battery charger
Battery service kit
Drain pans
Floor jack (10-20 tons)
General tools, pliers
General tools, screwdriver set
General tools, socket sets
Grease gun
Impact wrench, 1/2 inch, with sockets
Jumper cables
Multimeter
Portable or fixed lube dispenser
Portable pressure washer
Radiator pressure tester
Step ladder
Tire changer with tools
Water hose

07.0 DEMONSTRATE BASIC VEHICLE CONTROL PROCEDURES

EQUIPMENT DESCRIPTION

Tractors with the following components:
Drive axles, single drive
Drive axles, tandem drive
Engine, diesel
Engine, gasoline (optional)
Suspension system, air cushion (optional)
Suspension system, leaf spring
Transmission, automatic (optional)
Transmission, standard, multi-range
Traffic cones and barriers
Trailers, various types
Wheel chock blocks

08.0 DEMONSTRATE BACKING, COUPLING AND UNCOUPLING SKILLS

EQUIPMENT DESCRIPTION

None

09.0 DEMONSTRATE BASIC VEHICLE MANEUVERS

EQUIPMENT DESCRIPTION

None

10.0 DEMONSTRATE ROAD DRIVING SKILLS

EQUIPMENT DESCRIPTION

None

11.0 DESCRIBE HAZARDOUS-DRIVING SKILLS

EQUIPMENT DESCRIPTION

None

12.0 DEMONSTRATE EMPLOYABILITY SKILLS

EQUIPMENT DESCRIPTION

None

13.0 DEMONSTRATE AN UNDERSTANDING OF ENTREPRENEURSHIP

EQUIPMENT DESCRIPTION

None

LICENSURE AND CREDENTIALING

Licensure

Program completers must obtain a valid chauffeur's license in order to qualify for employment as a commercial vehicle driver. This requirement includes a road test in accordance with Part 391 of the Federal Motor Carrier Safety Regulations. Commercial trucking organizations will require additional standards to be met in accordance with the Federal Motor Carrier Safety Regulations. Additional requirements will often include the following:

- Pass a DOT physical exam
- Pass drug tests on a recurring basis
- Pass a written exam
- Submit a list of all motor vehicle accidents in which the applicant was involved within the past three years, specifying the date and nature of each accident and any fatalities or personal injuries they caused
- Submit a list of all violations of motor vehicle ordinances or laws (excepting parking violations) in which the applicant was involved within the past three years, of which the applicant was convicted or forfeited bond or collateral
- Submit a detailed statement of facts and circumstances regarding any denial, revocation or suspension of any motor vehicle operator license
- Submit a statement that no such denial, revocation or suspension has occurred

Federal License Requirements

The following requirements apply only to commercial vehicle drivers operating in more than one state (interstate) with vehicles that:

- Weigh 26,001 pounds or more
- Carry 15 or more passengers
- Transport hazardous materials

The Federal Motor Carrier Safety Regulations, part 391, allows drivers of these vehicles to possess only one driver's license issued by the state where the driver lives. This Federal law is effective July 1, 1987. Exceptions to this law are listed below.

In addition to the license from the state where they live, some drivers may be required to have a license from the following states:

- Virginia: Required if you are employed in the state
- Florida: Required if you are a part-time resident or employed to drive certain vehicles in the state
- Connecticut: If you operate a tandem-trailer truck in Connecticut, you need a special license
- Illinois: If you live in a neighboring state and operate certain passenger-carrying vehicles in Illinois

These exceptions will be allowed only until the states pass laws to change these requirements, or until December 31, 1989, whichever comes first.

Credentialing

There are no other specific credentialing requirements for commercial truck drivers. However, it is recommended that the professional truck driver maintain membership in professional associations such as those listed in this guide. Employers will recognize a membership card from a professional organization as an indication of professional certification.

Training Certification

Employers will expect program completers to provide them with a graduation certificate and other written documentation showing the proficiency attained. Written test scores as well as on-the-road tests should be maintained by program completers to obtain employment. The commercial vehicle driving program director should insure that an appropriate graduation certificate is provided each program completer. An example of a statement of training is shown on the following pages.

SAMPLE

INSTRUCTIONS FOR PREPARING TRAINING CERTIFICATES

DRIVER

Name:	Enter full legal name.
Date of Birth:	Enter date of birth as obtained from driver's license or other official document.
Address:	Enter the address of the individual at the time the form is prepared.
Social Security Number	Enter social security number.
Driver's License Number and State:	Enter the driver's license number and the state in which the driver is licensed.

TRAINING OR EXPERIENCE

Units:	Enter the date in front of each Curriculum Unit Standard for which the driver has met all of the performance, knowledge, and skill objectives as specified in the Standards. For those not completed enter "N.C." in the space.
Total Hours:	Enter the total number of hours of behind-the-wheel time the student has received, total hours observation time (in cab) not driving and the total number of miles the student accumulated while behind the wheel.
Special Vehicles:	List any other special vehicles that the driver has qualified to operate safely, such as tankers or double bottoms.
Graduation Standards:	If the student has been administered the Final Examination Test Battery and has met the minimum proficiency standard.
Basis of Certification:	Check the box that shows why this Training Certificate is being issued.

CERTIFYING AUTHORITY

Organization:	Enter the name of the school or company responsible for providing the training/experience documented in the Training Certificate.
Individual:	Enter the name of the individual authorized to prepare Training Certificate.
Position:	Enter the official position of the individual within the certifying organization.
Signature:	Enter the handwritten signature of the authorized individual.
Date:	Enter the date on which the Training Certificate was prepared.

SAMPLE

TRAINING CERTIFICATE NUMBER (Serial Numbered)

DRIVER

Name: _____ Date of Birth: _____

Address: _____ _____ _____
(Number and Street) (State) (Zip)

_____ _____ _____
(Social Security Number) (Driver License Number) (St)

TRAINING OR EXPERIENCE

The driver has met all training objectives for the Curriculum Unit Standards on the dates shown below:

Basic Control
___ Control Systems
___ Vehicle Inspection
___ Basic Control
___ Shifting
___ Backing
___ Coupling/ Uncoupling
___ Proficiency Development
___ Special Rigs

Safe Operating Practices
___ Visual Search
___ Communication
___ Speed Management
___ Space Management
___ Night Operation
___ Extreme Driving Conditions
___ Proficiency Development

Vehicle Maintenance
___ Vehicle Systems
___ Preventive Maintenance & Servicing
___ Diagnosing & Reporting

Advanced Operation Practices
___ Hazard Perception
___ Emergency Manuevers
___ Skid Control/Recovery

Nonvehicle Activities
___ Handling Cargo
___ Cargo Documentation
___ Hours of Service
___ Accident Procedures
___ Personal Health & Safety
___ Trip Planning
___ Public & Employer Relations

Total Hours Driven:___ Total Hours Observation:___ Total Miles Driven:___

SPECIAL VEHICLES

The driver has met Training Standards for the specific equipment shown below:

Description: _____
_____
_____

GRADUATION STANDARDS

The driver has fulfilled the Graduation Standards on the dates shown below:

Written test on:_____ Range test on:_____ Street test on:_____

BASIS OF CERTIFICATION (checked below)

A ☐ Completed all of the Curriculum Unit Standards and Graduation Standards

B ☐ Completed and met all the requirements of only the Curriculum Unit Standards shown

C ☐ Completed and met all the Graduation Standards only (had no training)

CERTIFYING AUTHORITY

_____

Organization

_____

Authorized Individual Postion Signature

_____

Street Address City State Zip Code

_____

Area Code/Telephone Number Date

PROFESSIONAL DEVELOPMENT

Teacher Technical Updating

Technical updating workshops are scheduled periodically throughout the State, usually in the summer months. Teachers should take advantage of the opportunity to attend the commercial vehicle driving technical update workshops when they are held. All instructional staff are encouraged to participate in as many training opportunities as possible.

Teachers should seek opportunities with local commercial trucking companies to maintain currency with industry trends. During periods when school is not in session, teachers are encouraged to make arrangements to drive for commercial trucking companies in order to maintain current knowledge and skills.

Membership in professional associations offers vocational educators an enormous range of opportunities for working together to strengthen the field and to develop personal competence and satisfaction in work. The associations have similar goals and activities. They seek excellence in program content by means of joint efforts among members, communications that keep members current, forums for the discussion of issues in the field, useful and stimulating publications and sound professional growth experiences at local, state, regional and national meetings and annual conventions. They are concerned with increasing public understanding and support of the field. Teachers are encouraged to maintain affiliation with professional organizations. A list of professional organizations follows this section of the guide.

Teacher Standards

As a prerequisite to certification, teachers must have the required years of experience in the appropriate technical field as defined in the certification standards. For the Commercial Vehicle Driving program the requirements are six years continuous experience in commercial vehicle driving. The teacher is then judged qualified to teach upon meeting one of the following criteria: (1) regular or temporary Florida teacher's certificate with appropriate coverage, (2) Approval of local school board consistent with adopted school policy or (3) regular or temporary Florida teacher's certificate with other than appropriate coverage (has met all occupational experience requirements prescribed as a prerequisite to appropriate certification and has been approved by the school board to teach

out-of-field.) Refer to the Curriculum Framework for this program to determine the appropriate occupational specialization coverage required for certification.

Instructional staff must have technical competency and meet all State and local requirements for certification. Instructors should hold current, nationally recognized certification in the subject areas taught, if awarded.

Commercial vehicle driver training program instructors must have a valid driver's license and have demonstrated exceptional work during the period of industry employment. Commercial vehicle driver instructors must also hold a valid chauffeur's license. Beginning teachers must be enrolled in the State Beginning Teacher Program.

A systematic method of obtaining "substitute" instructors, approved by the school board, should be used to assure instructional continuity. An orientation session for substitutes should be held on a regular basis. The substitute should be a competent instructor in the occupational area and specific competencies taught.

Professional Organizations and Support Services

PROFESSIONAL ORGANIZATIONS

AMERICAN VOCATIONAL ASSOCIATION (AVA)
1410 King Street
Alexandria, VA 22314
1-800-826-9972

FLORIDA ASSOCIATION FOR TRADE AND INDUSTRIAL EDUCATION, INC. (FATIE)
Florida Department of Education
Industrial Education - Vocational Division
Knott Building
Tallahassee, FL 32399
904-488-0484

FLORIDA VOCATIONAL ASSOCIATION (FVA)
1420 North Paul Russell Road
Tallahassee, FL 32399
904-878-6860

FLORIDA VOCATIONAL INDUSTRIAL CLUBS OF AMERICA (VICA)
Florida Department of Education
Knott Building
Tallahassee, FL 32399
904-488-0484

TRADE ORGANIZATIONS

This list contains trade associations and technical societies. Many offer training programs of some sort, either directly or through their member companies. Specific details should be requested in writing.

NORTH AMERICAN PROFESSIONAL DRIVER EDUCATION ASSOCIATION (NAPDEA)
4935 West Foster Avenue
Chicago, IL 60630
312-777-9605

NATIONAL DRIVERS ASSOCIATION FOR THE PREVENTION OF TRAFFIC ACCIDENTS (NDAPTA)
Post Office Box 604
Bakersfield, CA 93302

AMERICAN SCHOOL AND COMMUNITY SAFETY ASSOCIATION (ASCSA)
1900 Association Drive
Reston, VA 22091
703-476-3440

AMERICAN TRUCKING ASSOCIATIONS INC.
2200 Mill Road
Alexandria, VA 22314
703-838-1700

NATIONAL COUNCIL OF INDEPENDENT TRUCKERS
Box 71
Lemont, IL 60439
312-985-3707

THE INTERNATIONAL BROTHERHOOD OF TEAMSTERS, CHAUFFEURS, WAREHOUSEMAN AND HELPERS OF AMERICA
25 Louisiana Avenue Northwest
Washington, DC 20001
202-624-6800

FL88CD18

019324
proposal #018858

CAREER MERIT ACHIEVEMENT PLAN (CAREER MAP)

COMMERCIAL VEHICLE DRIVING

(IN49.020500)

State of Florida

An affirmative action/equal opportunity employer

DEPARTMENT OF EDUCATION
Betty Castor, Commissioner of Education

DIVISION OF VOCATIONAL, ADULT AND COMMUNITY EDUCATION
Robert S. Howell, Director

DEVELOPED BY:
University of South Florida

INDUSTRY-BASED PARTNERSHIP PROGRAMS: The State of Florida is committed to the development of industry-based partnership programs, designed by education and industry to respond to industry's demand for a highly skilled work force.

ACKNOWLEDGEMENTS

PARTNERSHIP WITH INDUSTRY

The following industry representatives are recognized for their valuable contributions to the identification and validation of the commercial vehicle driving competencies reflected in this MAP:

Mr. Randy Beasley, Safety Director, Gator Freightways, Inc.
Mr. Tom Heath, Safety Director, Commercial Carrier Corporation
Mr. Pat Patton, Fleet Safety Supervisor, Florida Steel Corporation
Mr. Reo Hatfield, Terminal Manager, Smiths Transfer
Mr. Huey Wooten, C. F. Industries
Mr. Jeff Drury, Smalley Transportation Company
Mr. Jerry Osborn, H. L. Stansell, Inc.

For further information, contact
Bureau of Vocational Program and Staff Development
Division of Vocational, Adult, and Community Education
Department of Education
Knott Building
Tallahassee, FL 32399

©State of Florida, Department of State, 1988

Authorization for reproduction is hereby granted to the State System of Public Education as defined in 228.041(1), Florida Statutes. No authorization is granted for distribution or reproduction outside the State System of Public Education without prior approval in writing.

60

CONTENTS

ACKNOWLEDGEMENTS. i

IDENTIFICATION PAGE. 2

JOB TITLES. 2

OVERVIEW. 3

PURPOSE OF THE MAP. 3

HOW TO USE THE MAP. 3

RATING STUDENT PERFORMANCE STANDARDS. 4

COMMERCIAL VEHICLE DRIVING PROGRAM CONTENTS. 5

01.0 DESCRIBE VEHICLE SAFETY AND ACCIDENT PREVENTION PROCEDURES. 5

02.0 COMPLY WITH VEHICLE OPERATING REGULATIONS. 6

03.0 DEMONSTRATE PROPER CARGO HANDLING AND DOCUMENTATION PROCEDURES. 6

04.0 DEMONSTRATE PRE-TRIP PREPARATION PROCEDURES. 7

05.0 DEMONSTRATE VEHICLE INSPECTION PROCEDURES. 8

06.0 PERFORM VEHICLE MAINTENANCE AND SERVICING PROCEDURES. 9

07.0 DEMONSTRATE BASIC VEHICLE CONTROL PROCEDURES. 10

08.0 DEMONSTRATE BACKING, COUPLING AND UNCOUPLING SKILLS. 11

09.0 DEMONSTRATE BASIC VEHICLE MANEUVERS. 12

10.0 DEMONSTRATE ROAD DRIVING SKILLS. 12

11.0 DESCRIBE HAZARDOUS DRIVING SKILLS. 14

P.O.W.E.R. SKILLS (PRINCIPLES OF WORK ENVIRONMENT READINESS). . . . 17

0. DEMONSTRATE EMPLOYABILITY SKILLS. 17

00. DEMONSTRATE AN UNDERSTANDING OF ENTREPRENEURSHIP. . . 17

000. COOPERATIVE WORK EXPERIENCE COMPETENCIES. 18

VERIFICATION. 19

COOPERATIVE WORK EXPERIENCE. 20

NOTES. 21

THIS MERIT ACHIEVEMENT PLAN RECORDS THE COMMERCIAL VEHICLE DRIVING ACHIEVEMENTS OF:

Student's Name _____

Student ID Number _____

Student's Address _____

_____

Initial Instructor _____

School _____

Date Started _____

PRIMARY JOB TITLE(S) FOR COMMERCIAL VEHICLE DRIVING

- Tractor Trailor and/or Truck Drivers (DOT#904.383-010)

Program completers qualify for the primary job title(s) listed above. Related job titles may be added based on those job titles found in industry and/or the Dictionary of Occupational Titles.

OVERVIEW

This Career MAP includes the competencies required for entry into the field of commercial vehicle driving. Business and industry representatives have recommended that students in this field master these competencies in order to become employable. Local education agencies (LEAs) may adapt these competencies to meet their workforce needs.

PURPOSE OF THE MAP

The purposes of the MAP are: to display the student performance standards (SPS) required by the LEA and to document the level of achievement on student performance standards that the student demonstrates.

HOW TO USE THE MAP

Administrator and Instructor. The administrator and instructor can use Career MAPs in curriculum planning, program updating and improvement and teacher recruitment, selection and updating. If the LEA changes or adds student performance standards, the revised or additional student performance standards should be included in the blank boxes that appear within each intended outcome or at the end of this MAP.

Instructor. The instructor can use Career MAPs to keep track of student progress on student performance standards. By periodically reviewing the ratings on student performance standards, the instructor can identify a student's strengths and weaknesses and, on that basis, identify the skills for which the student needs remedial instruction or advanced training. The MAP can also be useful in student counseling and evaluation.

Co-op Instructor/Employer. The employer who sponsors a co-op program should use the Career MAP for keeping a record of the student's performance on appropriate standards. The MAPs will also help the co-op instructor/employer in counseling and evaluating the student.

Student. The student may use the MAP to show potential employers the performance standards he or she has mastered. In order to present a complete record, the student should encourage the instructor/co-op employer to rate his or her level of achievement on all the appropriate student performance standards and to fill in the verification form/cooperative work experience page in the back of this MAP.

Employer. The MAP shows an employer the student performance standards mastered by the student (a prospective employee) and the proficiency level achieved on each student performance standard. This information can help the employer make decisions about hiring, job assignments and job-training needs.

RATING STUDENT PERFORMANCE STANDARDS

Ratings on student performance standards should be based upon business/industrial performance standards. The evaluator observes and evaluates student performance as he or she would in the role of the employer or supervisor.

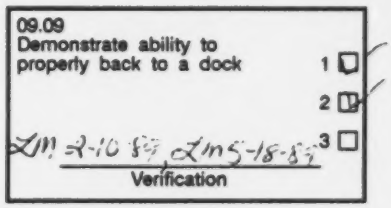
For each skill listed the learner receives a rating of 1, 2 or 3. Each rating indicates a particular level of achievement:

1 = Learner demonstrates knowledge and understanding of this student performance standard, but is not yet able to apply that knowledge or understanding.

2 = Learner performs this student performance standard satisfactorily with only periodic supervision.

3 = Learner performs this student performance standard satisfactorily without supervision.

Whenever a performance standard is demonstrated, the instructor checks the appropriate rating box (1, 2 or 3) and initials and dates the verification line. If the student later demonstrates a higher level of achievement on a performance competency, the instructor crosses out the old level, checks the higher level and then enters his or her initials and the new date on the verification line, as shown in the following example:



NOTE: A student performance standard without a checked rating indicates that the learner has not mastered the standard from lack of either ability, time, opportunity or need (the student's area of specialization may not have required it).

01.0 DESCRIBE VEHICLE SAFETY AND ACCIDENT PREVENTION PROCEDURES.

01.01 Identify & explain the use of vehicle safety equipment. 1 ☐ 2 ☐ 3 ☐ Verification	01.02 Explain the use of fire extinguishers & fire fighting procedures. 1 ☐ 2 ☐ 3 ☐ Verification	01.03 Utilize seat belts & personal protection gear appropriate to type of operation. 1 ☐ 2 ☐ 3 ☐ Verification
01.04 Describe safe lifting procedures. 1 ☐ 2 ☐ 3 ☐ Verification	01.05 Describe personal safety equipment & procedures. 1 ☐ 2 ☐ 3 ☐ Verification	01.06 Describe actions applicable for vehicle accidents. 1 ☐ 2 ☐ 3 ☐ Verification
01.07 Describe accident reporting requirements (company, state, federal). 1 ☐ 2 ☐ 3 ☐ Verification	01.08 Identify all information needed for accident reports to the State, the employer & the insurance company. 1 ☐ 2 ☐ 3 ☐ Verification	01.09 Describe procedures for protecting the scene of an accident. 1 ☐ 2 ☐ 3 ☐ Verification
01.10 Identify types of hazardous cargos. 1 ☐ 2 ☐ 3 ☐ Verification	01.11 Describe personal liability requirements. 1 ☐ 2 ☐ 3 ☐ Verification	01.12 Identify hazardous road conditions that are a potential threat to the safety of the tractor trailer driver. 1 ☐ 2 ☐ 3 ☐ Verification
01.13 Describe activities & characteristics of other road users that make them potentially dangerous. 1 ☐ 2 ☐ 3 ☐ Verification	01.14 Describe the potential consequences of excessive speed. 1 ☐ 2 ☐ 3 ☐ Verification	01.15 Describe the potential consequences of use of drugs or alcohol. 1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification

02.0 COMPLY WITH VEHICLE OPERATING REGULATIONS.

02.01 Comply with hours of service regulations. 1 ☐ 2 ☐ 3 ☐ Verification	02.02 Maintain a complete, neat & accurate driver's duty status log. 1 ☐ 2 ☐ 3 ☐ Verification	02.03 Keep accurate records required by hours of service regulations. 1 ☐ 2 ☐ 3 ☐ Verification
02.04 Perform mathematical calculations necessary to recap & apply totals to the hours of service regulations. 1 ☐ 2 ☐ 3 ☐ Verification	02.05 Determine driving hours remaining on a particular day or tour of duty. 1 ☐ 2 ☐ 3 ☐ Verification	02.06 Comply with applicable Department of Transportation regulations. 1 ☐ 2 ☐ 3 ☐ Verification
02.07 Comply with Florida Public Safety Commission regulations. 1 ☐ 2 ☐ 3 ☐ Verification	02.08 Comply with Interstate Commerce Commission regulations. 1 ☐ 2 ☐ 3 ☐ Verification	02.09 Comply with state & local traffic laws including restrictio on vehicle size & weight. 1 ☐ 2 ☐ 3 ☐ Verification
02.10 Identify permit requirements. 1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification

03.0 DEMONSTRATE PROPER CARGO HANDLING AND DOCUMENTATION PROCEDURES.

03.01 Load & unload cargo safely & efficiently. 1 ☐ 2 ☐ 3 ☐ Verification	03.02 Obtain gross weight & axle weight. 1 ☐ 2 ☐ 3 ☐ Verification	03.03 Distribute cargo load to meet legal weight & safety requirements. 1 ☐ 2 ☐ 3 ☐ Verification

03.04 Secure cargo using blocking, bracing, packing, rope, cable, chains & strapping. 1 ☐ 2 ☐ 3 ☐ Verification	03.05 Mount placards when carrying hazardous materials. 1 ☐ 2 ☐ 3 ☐ Verification	03.06 Describe procedure for use of common cargo handling equipment. 1 ☐ 2 ☐ 3 ☐ Verification
03.07 Identify categories of hazardous materials & the need for specialized training to handle hazardous materials. 1 ☐ 2 ☐ 3 ☐ Verification	03.08 Identify hazardous materials documentation requirements. 1 ☐ 2 ☐ 3 ☐ Verification	03.09 Verify nature, amount & condition of cargo on both pickup & delivery. 1 ☐ 2 ☐ 3 ☐ Verification
03.10 Verify information on bill of lading & properly record & report discrepancies & damage to the cargo. 1 ☐ 2 ☐ 3 ☐ Verification	03.11 Obtain appropriate signatures on delivery receipts & other required forms. 1 ☐ 2 ☐ 3 ☐ Verification	03.12 Properly prepare a manifest. 1 ☐ 2 ☐ 3 ☐ Verification
03.13 Properly handle C.O.D. shipments. 1 ☐ 2 ☐ 3 ☐ Verification	03.14 Verify door seal number against shipping document. 1 ☐ 2 ☐ 3 ☐ Verification	03.15 Comply with port of entry or exit & other inspection station procedures. 1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification

04.0 DEMONSTRATE PRE-TRIP PREPARATION PROCEDURES.

04.01 Check & secure tractor trailer or vehicle permit. 1 ☐ 2 ☐ 3 ☐ Verification	04.02 Check for accident reports packet. 1 ☐ 2 ☐ 3 ☐ Verification	04.03 Plan a route from one point to another that is optimal in terms of travel time, fuel costs, potential hazards & federal, state & local travel restrictions. 1 ☐ 2 ☐ 3 ☐ Verification
04.04 Arrange to secure permits required by the nature of the vehicle, its cargo & route to be traveled. 1 ☐ 2 ☐ 3 ☐ Verification	04.05 Arrange a secure place for vehicle on layovers, especially when transporting hazardous materials. 1 ☐ 2 ☐ 3 ☐ Verification	04.06 Demonstrate map reading skills. 1 ☐ 2 ☐ 3 ☐ Verification

04.07 Estimate travel time & plan rest stops & layovers. 1 ☐ 2 ☐ 3 ☐ Verification	04.08 Estimate fuel consumption & plan fuel stops. 1 ☐ 2 ☐ 3 ☐ Verification	04.09 Estimate expense money & obtain funds &/or credit cards. 1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification

05.0 DEMONSTRATE VEHICLE INSPECTION PROCEDURES.

05.01 Check general appearance & condition of vehicle. 1 ☐ 2 ☐ 3 ☐ Verification	05.02 Check fuel, oil & water levels. 1 ☐ 2 ☐ 3 ☐ Verification	05.03 Check signal lights, stop lights & running lights. 1 ☐ 2 ☐ 3 ☐ Verification
05.04 Check tires, rims & suspension. 1 ☐ 2 ☐ 3 ☐ Verification	05.05 Check horn, windshield wipers, mirrors & reflectors. 1 ☐ 2 ☐ 3 ☐ Verification	05.06 Check fifth wheel, trailer hook up & brake lines. 1 ☐ 2 ☐ 3 ☐ Verification
05.07 Check emergency flares & fire extinguishers. 1 ☐ 2 ☐ 3 ☐ Verification	05.08 Check instruments for normal readings. 1 ☐ 2 ☐ 3 ☐ Verification	05.09 Check steering system, brake action & tractor protection valve. 1 ☐ 2 ☐ 3 ☐ Verification
05.10 Check cargo blocking, bracing & tie down. 1 ☐ 2 ☐ 3 ☐ Verification	05.11 Perform enroute inspections of mirrors, instrument panel, engine & power train, suspension system & brakes. 1 ☐ 2 ☐ 3 ☐ Verification	05.12 Perform post-trip inspection of vehicle & all systems. 1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification

06.0 PERFORM VEHICLE MAINTENANCE AND SERVICING PROCEDURES.

06.01 Describe function & operation of key vehicle systems. 1 ☐ 2 ☐ 3 ☐ Verification	06.02 Service engine fuel, oil, coolant, battery & filters. 1 ☐ 2 ☐ 3 ☐ Verification	06.03 Check tire air pressure. 1 ☐ 2 ☐ 3 ☐ Verification
06.04 Change wheels (with tires mounted) & check for proper tire & wheel mounting. 1 ☐ 2 ☐ 3 ☐ Verification	06.05 Drain moisture from air brake supply reservoirs & fuel. 1 ☐ 2 ☐ 3 ☐ Verification	06.06 Check & adjust brakes. 1 ☐ 2 ☐ 3 ☐ Verification
06.07 Clean & repair lights. 1 ☐ 2 ☐ 3 ☐ Verification	06.08 Change fuses & reset circuit breakers. 1 ☐ 2 ☐ 3 ☐ Verification	06.09 Replace fan & alternator belts. 1 ☐ 2 ☐ 3 ☐ Verification
06.10 Clean interior & exterior of vehicle. 1 ☐ 2 ☐ 3 ☐ Verification	06.11 Check & replace mud/rain flaps. 1 ☐ 2 ☐ 3 ☐ Verification	06.12 Check & adjust CB radio, if so equipped. 1 ☐ 2 ☐ 3 ☐ Verification
06.13 Check & adjust tandem & fifth-wheel slides, if so equipped. 1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification

07.0 DEMONSTRATE BASIC VEHICLE CONTROL PROCEDURES.

07.01 Place transmission in neutral before starting engine. 1 ☐ 2 ☐ 3 ☐ Verification	07.02 Start, warm up & shut down the engine, according to the manufacturer's specifications. 1 ☐ 2 ☐ 3 ☐ Verification	07.03 Build full pressure (90-120 PSI) in air tanks before starting. 1 ☐ 2 ☐ 3 ☐ Verification
07.04 Test parking brake & service brake before starting. 1 ☐ 2 ☐ 3 ☐ Verification	07.05 Coordinate use of accelerator & clutch to achieve smooth acceleration & avoid clutch abuse. 1 ☐ 2 ☐ 3 ☐ Verification	07.06 Maintain proper engine RPM while driving. 1 ☐ 2 ☐ 3 ☐ Verification
07.07 Properly modulate air brakes to bring vehicle to a smooth stop. 1 ☐ 2 ☐ 3 ☐ Verification	07.08 Shift up & down through all gears of all major types of conventional transmissions. 1 ☐ 2 ☐ 3 ☐ Verification	07.09 Double clutch & time shift for smooth & fuel efficient performance. 1 ☐ 2 ☐ 3 ☐ Verification
07.10 Select proper gear for speed & highway conditions. 1 ☐ 2 ☐ 3 ☐ Verification	07.11 Operate automatic & semiautomatic transmissions. 1 ☐ 2 ☐ 3 ☐ Verification	07.12 Coordinate steering, braking & acceleration to take the vehicle through a desired path forward & to back in a straight line. 1 ☐ 2 ☐ 3 ☐ Verification
07.13 Adequately judge the path trailer will take (off-tracking) as vehicle negotiates left or right curves & turns. 1 ☐ 2 ☐ 3 ☐ Verification	07.14 Use clutch & gears to slow vehicle. 1 ☐ 2 ☐ 3 ☐ Verification	07.15 Park the vehicle, set brakes & shut off the engine. 1 ☐ 2 ☐ 3 ☐ Verification
07.16 Properly chock/block wheels. 1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification

08.0 DEMONSTRATE BACKING, COUPLING AND UNCOUPLING SKILLS.

08.01 Check area before backing. 1 ☐ 2 ☐ 3 ☐ Verification	08.02 Properly utilize guides & mirrors. 1 ☐ 2 ☐ 3 ☐ Verification	08.03 Properly back in straight line & curved paths. 1 ☐ 2 ☐ 3 ☐ Verification
08.04 Properly back into an alley dock. 1 ☐ 2 ☐ 3 ☐ Verification	08.05 Properly parallel park. 1 ☐ 2 ☐ 3 ☐ Verification	08.06 Park in a jackknife position. 1 ☐ 2 ☐ 3 ☐ Verification
08.07 Judge side, rear & overhead clearances & path of the trailer. 1 ☐ 2 ☐ 3 ☐ Verification	08.08 Apply the principles of reverse-steering an articulated vehicle. 1 ☐ 2 ☐ 3 ☐ Verification	08.09 Align the tractor properly to connect with trailer. 1 ☐ 2 ☐ 3 ☐ Verification
08.10 Secure the trailer against movement. 1 ☐ 2 ☐ 3 ☐ Verification	08.11 Back the tractor properly into the trailer kingpin without damage. 1 ☐ 2 ☐ 3 ☐ Verification	08.12 Perform mechanical & visual checks to make sure coupling is secure. 1 ☐ 2 ☐ 3 ☐ Verification
08.13 Connect electrical & air lines properly. 1 ☐ 2 ☐ 3 ☐ Verification	08.14 Set in-cab air brake controls properly. 1 ☐ 2 ☐ 3 ☐ Verification	08.15 Retract & secure landing gear after coupling is secure. 1 ☐ 2 ☐ 3 ☐ Verification
08.16 Properly uncouple & secure the trailer. 1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification

09.0 DEMONSTRATE BASIC VEHICLE MANEUVERS.

09.01 Demonstrate ability to make a straight in approach to an alley. 1 ☐ 2 ☐ 3 ☐ Verification	09.02 Demonstrate ability to drive forward through an alley for 100 feet. 1 ☐ 2 ☐ 3 ☐ Verification	09.03 Demonstrate ability to properly stop the unit within 12 inches of the end of the alley. 1 ☐ 2 ☐ 3 ☐ Verification
09.04 Demonstrate ability to back 100 feet through an alley. 1 ☐ 2 ☐ 3 ☐ Verification	09.05 Demonstrate ability to properly stop the unit within 12 inches of the end of the alley. 1 ☐ 2 ☐ 3 ☐ Verification	09.06 Demonstrate ability to make proper straight in approach to multiple curves (serpentine). 1 ☐ 2 ☐ 3 ☐ Verification
09.07 Demonstrate ability to drive forward through curves (serpentine) while keeping tires inside of line. 1 ☐ 2 ☐ 3 ☐ Verification	09.08 Demonstrate ability to properly position unit for backing into a loading dock. 1 ☐ 2 ☐ 3 ☐ Verification	09.09 Demonstrate ability to properly back to a dock. 1 ☐ 2 ☐ 3 ☐ Verification
09.10 Demonstrate ability to properly stop unit within 12 inches of the dock without contacting dock. 1 ☐ 2 ☐ 3 ☐ Verification	09.11 Demonstrate ability to properly enter a weighing platform. 1 ☐ 2 ☐ 3 ☐ Verification	09.12 Demonstrate ability to properly maneuver double bottom trailers. 1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification

10.0 DEMONSTRATE ROAD DRIVING SKILLS.

10.01 Carefully enter traffic from parked position. 1 ☐ 2 ☐ 3 ☐ Verification	10.02 Use clutch & gears properly. 1 ☐ 2 ☐ 3 ☐ Verification	10.03 Start without rolling backward. 1 ☐ 2 ☐ 3 ☐ Verification

10.04 Use mirrors properly. 1 ☐ 2 ☐ 3 ☐ Verification	10.05 Signal intention to turn well in advance. 1 ☐ 2 ☐ 3 ☐ Verification	10.06 Get into proper lane well in advance of turn. 1 ☐ 2 ☐ 3 ☐ Verification
10.07 Check traffic conditions & turn only when intersection is clear. 1 ☐ 2 ☐ 3 ☐ Verification	10.08 Restrict traffic from passing on right when preparing to complete a right hand turn. 1 ☐ 2 ☐ 3 ☐ Verification	10.09 Complete a turn promptly & safely & not impede other traffic. 1 ☐ 2 ☐ 3 ☐ Verification
10.10 Select & shift to proper gear prior to beginning any turn. 1 ☐ 2 ☐ 3 ☐ Verification	10.11 Obey all traffic signals. 1 ☐ 2 ☐ 3 ☐ Verification	10.12 Plan stop in advance & adjust speed correctly. 1 ☐ 2 ☐ 3 ☐ Verification
10.13 Use brakes properly on grades. 1 ☐ 2 ☐ 3 ☐ Verification	10.14 Plan stop far enough in advance to avoid hard braking. 1 ☐ 2 ☐ 3 ☐ Verification	10.15 Stop clear of crosswalks. 1 ☐ 2 ☐ 3 ☐ Verification
10.16 Come to a complete stop at all stop signs. 1 ☐ 2 ☐ 3 ☐ Verification	10.17 Yield right of way at intersections having yield signs. 1 ☐ 2 ☐ 3 ☐ Verification	10.18 Check for cross traffic regardless of traffic signals. 1 ☐ 2 ☐ 3 ☐ Verification
10.19 Enter all intersections prepared to stop if necessary. 1 ☐ 2 ☐ 3 ☐ Verification	10.20 Stop at a minimum of 15 feet but not more than 50 feet before railroad grade crossing if stop is necessary. 1 ☐ 2 ☐ 3 ☐ Verification	10.21 Select proper gear & do not shift gears on railroad grade crossing. 1 ☐ 2 ☐ 3 ☐ Verification
10.22 Allow sufficient space ahead for passing. 1 ☐ 2 ☐ 3 ☐ Verification	10.23 Pass only in safe locations. 1 ☐ 2 ☐ 3 ☐ Verification	10.24 Pass on two lane highway. 1 ☐ 2 ☐ 3 ☐ Verification
10.25 Pass on four or more lane highway. 1 ☐ 2 ☐ 3 ☐ Verification	10.26 Signal changing lanes before & after passing. 1 ☐ 2 ☐ 3 ☐ Verification	10.27 Warn driver ahead of intention to pass. 1 ☐ 2 ☐ 3 ☐ Verification

COMMERCIAL VEHICLE DRIVING

10.28 Pass only when appropriate to avoid impeding other traffic. 1 ☐ 2 ☐ 3 ☐ Verification	10.29 Return to right lane promptly, but only when safe to do. 1 ☐ 2 ☐ 3 ☐ Verification	10.30 Observe speed limits. 1 ☐ 2 ☐ 3 ☐ Verification
10.31 Adjust speed properly to road, weather & traffic conditions. 1 ☐ 2 ☐ 3 ☐ Verification	10.32 Slow down in advance of curves, danger zones & intersections. 1 ☐ 2 ☐ 3 ☐ Verification	10.33 Maintain consistent speed where possible. 1 ☐ 2 ☐ 3 ☐ Verification
10.34 Yield right of way. 1 ☐ 2 ☐ 3 ☐ Verification	10.35 Allow faster traffic to pass. 1 ☐ 2 ☐ 3 ☐ Verification	10.36 Use horn only when necessary. 1 ☐ 2 ☐ 3 ☐ Verification
10.37 Park only in legally attained parking areas. 1 ☐ 2 ☐ 3 ☐ Verification	10.38 Check instruments at regular intervals. 1 ☐ 2 ☐ 3 ☐ Verification	10.39 Maintain proper engine RPM while driving. 1 ☐ 2 ☐ 3 ☐ Verification
10.40 Demonstrate ability to properly maneuver double bottom trailers on two lane & four lane highways. 1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification

11.0 DESCRIBE HAZARDOUS DRIVING SKILLS.

11.01 Describe preparation for operation in cold weather. 1 ☐ 2 ☐ 3 ☐ Verification	11.02 Demonstrate proper procedure for expelling moisture from the air tanks after each trip. 1 ☐ 2 ☐ 3 ☐ Verification	11.03 Describe proper procedure for checking ice accumulation on brakes, slack adjuster, air hoses, electrical wiring & radiator shutters during operation. 1 ☐ 2 ☐ 3 ☐ Verification

11.04 Describe operational adjustments necessary to maintain control in all weather conditions. 1 ☐ 2 ☐ 3 ☐ Verification	11.05 Describe procedures to check safe operation of brakes after driving through deep water. 1 ☐ 2 ☐ 3 ☐ Verification	11.06 Perform proper use of windshield wipers, washers & defrosters to maintain visibility. 1 ☐ 2 ☐ 3 ☐ Verification
11.07 Demonstrate ability for observing road surface for changes in conditions. 1 ☐ 2 ☐ 3 ☐ Verification	11.08 Demonstrate ability for recognizing conditions that produce low traction, including initial rainfall, ice, snow & mud. 1 ☐ 2 ☐ 3 ☐ Verification	11.09 Describe procedures to avoid skidding & jackknifing. 1 ☐ 2 ☐ 3 ☐ Verification
11.10 Describe procedures to avoid hydroplaning & describe the road & vehicle conditions that produce it. 1 ☐ 2 ☐ 3 ☐ Verification	11.11 Describe procedures for mounting & dismounting tire chains. 1 ☐ 2 ☐ 3 ☐ Verification	11.12 Describe procedures for extricating the vehicle from snow, sand & mud by maneuvering or towing. 1 ☐ 2 ☐ 3 ☐ Verification
11.13 Demonstrate ability to adjust rate of change in speed & direction to road conditions to avoid skidding. 1 ☐ 2 ☐ 3 ☐ Verification	11.14 Demonstrate ability to coordinate acceleration & shifting to overcome the resistance of snow, sand & mud. 1 ☐ 2 ☐ 3 ☐ Verification	11.15 Demonstrate ability to perform checks on brake adjustment prior to mountain driving. 1 ☐ 2 ☐ 3 ☐ Verification
11.16 Demonstrate ability to use right lane or special truck lane going up grades. 1 ☐ 2 ☐ 3 ☐ Verification	11.17 Demonstrate ability to place transmission in appropriate gear for engine braking before starting downgrade. 1 ☐ 2 ☐ 3 ☐ Verification	11.18 Demonstrate ability to use proper braking techniques & maintain proper engine braking before starting downgrades. 1 ☐ 2 ☐ 3 ☐ Verification
11.19 Describe proper use of truck escape ramp, if available, brakes fail on a downgrade. 1 ☐ 2 ☐ 3 ☐ Verification	11.20 Demonstrate ability to observe temperature gage frequently when pulling heavy loads up long grades. 1 ☐ 2 ☐ 3 ☐ Verification	11.21 Describe the effect of vehicle weight & speed upon braking & shifting ability on long downgrades. 1 ☐ 2 ☐ 3 ☐ Verification
11.22 Identify the meaning & use of percent of grade signs. 1 ☐ 2 ☐ 3 ☐ Verification	11.23 Demonstrate bringing the truck to a stop in the shortest possible distance while maintaining directional control on a dry surface. 1 ☐ 2 ☐ 3 ☐ Verification	11.24 Demonstrate a quick evasive turn on a dry surface. 1 ☐ 2 ☐ 3 ☐ Verification
11.25 Describe procedures to make an evasive turn off the roadway & return to the roadway while maintaining directional control. 1 ☐ 2 ☐ 3 ☐ Verification	11.26 Describe procedures to bring the vehicle to a stop in the event of a brake failure. 1 ☐ 2 ☐ 3 ☐ Verification	11.27 Describe procedures to maintain control of the vehicle in the event of a blowout. 1 ☐ 2 ☐ 3 ☐ Verification

COMMERCIAL VEHICLE DRIVING

11.28 Demonstrate ability to turn the steering wheel 180 degrees in either direction quickly while maintaining a grip on the steering wheel. 1 ☐ 2 ☐ 3 ☐ Verification	11.29 Describe procedures to bring tractor trailer to a stop in the shortest possible distance while maintaining directional control on a slippery surface. 1 ☐ 2 ☐ 3 ☐ Verification	11.30 Describe procedures to recover from tractor or trailer skids induced by snow, ice, water, oil, sand, wet leaves or other slippery surfaces. 1 ☐ 2 ☐ 3 ☐ Verification
11.31 Describe procedures to countersteer out of a skid in a way that will regain directional control & not produce another skid. 1 ☐ 2 ☐ 3 ☐ Verification	11.32 Demonstrate ability to operate brakes properly to provide maximum braking without loss of control. 1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification

0.0 DEMONSTRATE EMPLOYABILITY SKILLS.

0.01 Conduct a job search.
1 ☐ 2 ☐ 3 ☐
Verification

0.02 Secure information about a job.
1 ☐ 2 ☐ 3 ☐
Verification

0.03 Identify documents that may be required when applying for a job.
1 ☐ 2 ☐ 3 ☐
Verification

0.04 Complete a job application form correctly.
1 ☐ 2 ☐ 3 ☐
Verification

0.05 Demonstrate competence in job interview techniques.
1 ☐ 2 ☐ 3 ☐
Verification

0.06 Identify or demonstrate appropriate responses to criticism from employer, supervisor or other persons.
1 ☐ 2 ☐ 3 ☐
Verification

0.07 Identify acceptable work habits.
1 ☐ 2 ☐ 3 ☐
Verification

0.08 Demonstrate knowledge of how to make job changes appropriately.
1 ☐ 2 ☐ 3 ☐
Verification

0.09 Demonstrate acceptable employee health habits.
1 ☐ 2 ☐ 3 ☐
Verification

00.0 DEMONSTRATE AN UNDERSTANDING OF ENTREPRENEURSHIP.

00.01 Define entrepreneurship.
1 ☐ 2 ☐ 3 ☐
Verification

00.02 Describe the importance of entrepreneurship to the American economy.
1 ☐ 2 ☐ 3 ☐
Verification

00.03 List the advantages & disadvantages of business ownership.
1 ☐ 2 ☐ 3 ☐
Verification

00.04 Identify the risks involved in ownership of a business.
1 ☐ 2 ☐ 3 ☐
Verification

00.05 Identify the necessary personal characteristics of a successful entrepreneur.
1 ☐ 2 ☐ 3 ☐
Verification

00.06 Identify the business skills needed to operate a small business efficiently & effectively.
1 ☐ 2 ☐ 3 ☐
Verification

1 ☐ 2 ☐ 3 ☐
Verification

1 ☐ 2 ☐ 3 ☐
Verification

1 ☐ 2 ☐ 3 ☐
Verification

P.O.W.E.R. SKILLS (PRINCIPLES OF WORK ENVIRONMENT READINESS)

000.0 COOPERATIVE WORK EXPERIENCE COMPETENCIES.

1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification
1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification	1 ☐ 2 ☐ 3 ☐ Verification

VERIFICATION

The instructor should verify the level of mastery achieved by the student by initialing the competency box each time the student masters a competency. Later, if the student achieves a higher degree of mastery of a competency, the higher degree should be recorded and verified by the instructor.

INSTRUCTOR SHOULD SIGN FULL NAME AND SCHOOL NAME AND ADDRESS IN THE SPACE BELOW.

Verification	Signature
	Title
	School Name
	School Address

Verification	Signature
	Title
	School Name
	School Address

Verification	Signature
	Title
	School Name
	School Address

COOPERATIVE WORK EXPERIENCE

In addition to classroom training and laboratory performance identified on the Career MAP, this student has participated in cooperative work experience with employers as shown below:

Dates _____ Employer _____

Address of Employer _____

Supervisor _____

Supervisor Title _____

Dates _____ Employer _____

Address of Employer _____

Supervisor _____

Supervisor Title _____

Dates _____ Employer _____

Address of Employer _____

Supervisor _____

Supervisor Title _____

NOTES

This section of the MAP is provided so the instructor, employer, or student may list additional qualifying statements or other pertinent information. All comments should be initialed for verification.